The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 617.---Vol. XVII. LONDON, SATURDAY, JUNE 19, 1847. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

PURSUANT to a DECREE of the VICE-WARDEN'S COURT, made in the cause of "Hill v. Vigurs," the creditors in respect of the ROYAL FOLBERROW MINE, otherwise the ST. AGNES CONSOLIDATED MINES, in the parish of St. Agnes, within the said Stannaries, are, on or before the first day of July next, to come in and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro; or, in default thereof, they will be peremptorily excluded the benefit of the said Decree.—Dated Registrar's Office, Truro, the 10th day of June, 1847. 1

VALUABLE SPARE MINE MATERIALS FOR SALE.

MR. PRYOR is favoured with instructions TO SELL, BY PUBLIC AUCTION, on Monday, the 21st of June, by Eleven o'clock in the forenoon, at WHEAL JEWEL MINE, in the parish of Gwennap, the following valuable

MINE MATERIALS—CONSISTING OF

1 39-in. cylinder steam-engine, 2 pair of excellent shears, 28 9-ft. 10-in. pumps, 169-ft. 7-in. ditto, 7 9-ft. 9-in. ditto, 3 6-ft. 10-in. ditto, 6 9-ft. 8-in. ditto, 4 9-ft. 6-in. ditto, 3 3-ft. 10-in. matching-pieces, 1 7-in. door-piece, 2 6-in. ditto, 1 7-in. ditto, 1 10-in. ditto, 27-in. H-pieces, 1 10-in. ditto, 1 8-in. working, 1 7-in. working, 1 7-in. working barrel, 1 10-in. wood windbore, 1 10-in. stuffing-box and gland, 2 angle-bobs, 2 balance ditto, several pairs of caps, 30 fms. of 1¼ iron flat-rods, 1 pair of yokes, a quantity of staples and glands of various sizes, a large quantity of cast and wrought-iron, and a quantity of rod plates; also, several tons of tram-iron.

The auctioneer begs to solicit the attention of mine agents and others to the above materials, the same being of the best quality, and will be positively sold in one day. 2

Dated Bell Cottage, June 8, 1847.

FARMS AND COLLIERY AT TYDDYN AND ARGOED, NEAR MOLD, FLINTSHIRE, NORTH WALES.

BY MESSRS. THOMAS WINSTANLEY AND SONS,

On Tuesday, the 29th June next, at Two o'clock in the afternoon, at the Black Lion Hotel, at Mold, in one or more lots, by order of the trustees of the late Mrs. Hobson's estates,

TWO FARMS, in the townships of BISTREE and ARGOED—viz., TYDDYN—in the occupation of Mr. J. Catherall; and BRONWHLFA, in the occupation of Mrs. Ann Ward.

And also EIGHT COTTAGES, upon the above farms.

And also the valuable COAL MINES under the above farms.

The farms contain 277 acres of excellent land, including 32 acres of thriving woods and plantations, and 54 acres of fine old meadow land, of which more than half is artificially irrigated from the River Alyn, producing some of the largest crops of grass in the country. The farm-houses and farm-buildings are commodious and convenient.

TYDDYN HOUSE is beautifully placed on an eminence, commanding extensive views of Moel Vama and the surrounding country, and is capable of being made, at a moderate expense, a very desirable residence for a gentleman.

The COLLIERY has been recently opened—operations have been hitherto confined almost exclusively to the proving of the seams of coal; they consist of the Main Coal, which is 8 feet thick, and the Hollin Coal, which is 7 feet thick, and are already proved to extend—of first-rate quality—for a considerable distance, with every prospect of their uninterrupted continuance across the broadest part of the estate, parallel with the turnpike-road—the ends of all the drivings being in fine coal—and the mine is now ready for extensive operation.

A tilework has been constructed upon a part of the estate, where there is excellent clay for making draining tiles, for the use of the estate and for sale.

The turnpike-road from Mold to Chester runs through the property for a distance of three-quarters of a mile; and a branch of the Chester and Holyhead Railway is in course of construction—crossing the lower end of the estate, near the turnpike-road—affording convenient carriage from the colliery, and connecting the district with Birkenhead, Chester, and the south.

The property is distant 1 mile from Mold, 6 from Flint, 11 from Chester, 11 from Wrexham, and 19 from Liverpool.

The property is freehold of inheritance, and is free from all rents and services. 3

Particulars may be had on application to Mr. Richard Isaac, Tyddyn Colliery, Mold; or to Mr. William Wood, solicitor, 1, Harrington-street, Liverpool.

IN CORNWALL.

THE TRENGWAINTON and NANSEGLOS ESTATES, with the MANSION, OFFICES, GROUNDS, and PLANTATIONS, together with the BOSWEDNAN, PULTEGGAN, HENDRA, and BOSWARTHEN ESTATES, which form a compact property, altogether 900 acres, within two miles of the town of PENZANCE.

MESSRS. BROOKS & GREEN are instructed by the proprietor TO SELL, BY AUCTION, on Wednesday, June the 30th, 1847, at Garraway's Coffee-house, Change-alley, Cornhill, at One o'clock precisely, unless in the meantime disposed of by private contract, the above exceedingly valuable

FREEHOLD ESTATES. 4

The peculiar features of this fine property will be well appreciated by the capitalist who requires residence or investment. It comprises, in the whole, about 900 acres of most fertile land, together with an elegant mansion, embosomed in a plantation of varied timber of upwards of 30 years' growth—commanding most interesting and picturesque sea and land views, including St. Michael's Mount, Mounts Bay, the Lizard, and the Ocean. The kitchen gardens are most judiciously planned, after Ragley, and are the best in the county, with extensive ranges of hot and succession houses. This property is happily situate in one of the most healthy spots in the kingdom; the air is dry and pure, and the water of the finest quality. To the East Indian or valetudinarian, this place, it is presumed, would be invaluable—the climate is very similar to the South of France. The farm-houses, cottages, agricultural buildings, and fences, are in excellent repair; there are manorial rights and privileges, and the district is rich in minerals; granite is an export of some consequence at Penzance; immense blocks can be worked on this estate; and, from its being an inclined plane to the port, very easily shipped. The estates are well stocked with game, and the fishing is excellent.

Penzance is within two miles, and, owing to its rapidly increasing population, it renders portions of this estate most valuable as building ground; and the estate presents the best opportunity for the disposal of its produce at a first-rate market.

Printed particulars and plans may be had at the principal inns at Launceston, Bodmin, Truro, St. Ives, Falmouth, and Plymouth; the Half Moon, Exeter; the Union Hotel, Penzance; Mr. J. H. James, St. Just, Penzance; Messrs. Millett and Borlase, solicitors, Penzance; Messrs. Coode, Browne, Kingdon, and Wilson, 13, Bedford-row, London; at Garraway's, Cornhill; and of Messrs. Brooks and Green, estate agents, surveyors, and auctioneers, 28, Old Bond-street, London, at whose gallery a cosmoramic view of the mansion and estate may be seen.

FLINTSHIRE.

SALE OF most IMPORTANT and HIGHLY VALUABLE FREEHOLD PROPERTY, consisting of all those extensive and newly-erected premises, the

GREENFIELD ZINC-WORKS,

Occupying an area of upwards of four statute acres, together with all the RAILWAYS, WHARFS, and LANDS adjoining and surrounding the same, comprehending, in the whole, nearly THIRTY STATUTE ACRES OF LAND, through the centre of which the line of the Great Chester and Holyhead Railway passes, besides having a spacious quay, or wharf, and a considerable frontage to the River Dee—thus possessing within itself the paramount advantages of water and railway communication; and immediately after the above, a SALE will be held of the whole of the MACHINERY and UTENSILS belonging to the premises, and others, removed from the Mostyn and Abbey Collieries, comprising—

A beautiful finished 300-horse power bright STEAM-ENGINE, which has scarcely been used

Two smaller BLACK ENGINES (one fixed on the premises, with force pumps, double rollers, and lathe attached, and the other just removed from the Abbey Colliery)

Large quantity of cast-iron PUMPS, from 2½ to 15 inches bore, with clack-door, bucket, and matching pieces.

Foundry and blacksmiths' fans, bellows, anvils, vices, screw-plates, taps and dies, moulds, tools, of all descriptions, and other requisites, trucks, wheelbarrows.

Near FIFTY IRON and WOOD COAL WAGGONS, with iron wheels.

Large quantities of Stourbridge and Buckley fire-bricks.

THREE large WEIGHING MACHINES, and several small patent scales.

Valuable turret clock, small tell-tale clock, new and old bar and angle iron, fire-bars, pulleys, nuts, screws, bolts, washers, rivets, scrap and sheet iron, large ladles and cauldrons, very large size gas metre, piping and burners, and other miscellaneous effects,

Which will be submitted to PUBLIC AUCTION, by Messrs. CHURTON, about the latter end of the month of June, upon the premises, at GREENFIELD, one mile from Holywell, four from Flint, and 14 from Chester and Rhyddlan. 5

Full particulars of the whole, and the time of sale, will shortly be published; and in the meantime the auctioneers will afford any further information.

The vendors are willing to TREAT for the SALE of the WORKS, BY PRIVATE CONTRACT.—Chester, June 1, 1847.

ON SALE—COLLIERIES, near BISHOP AUCKLAND, in the county of DURHAM.—TO BE SOLD BY PRIVATE CONTRACT, the UNEXPIRED TERM, held by the present lessees, in the GORDON and EVENWOOD COLLIERIES. The above collieries are now in work, and are so situated as to command a considerable export, as well as land sale, trade. These advantages will be materially increased by the formation of the Auckland Branch of the York and Newcastle Railway, and the new railways leading to the south and west—for all of which Acts are obtained. By the first, great facilities will be obtained for shipments on the Tyne and Wear.

For further particulars apply to Mr. Brogden, Stockton-on-Tees. 6

IRONSTONE AND COAL.—TO BE LET, ON LEASE, the WORKING of the IRONSTONE and COAL on the BRENCKBURN ESTATE, in NORTHUMBERLAND. There is an abundance of LIMESTONE, FREESTONE, and CLAY.—For particulars apply to Messrs. Druce and Sons, solicitors, 10, Billiter-square, London, where samples and analyses may be seen. 7

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 8

STEAM-ENGINES AND OTHER MINE MATERIALS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, at TRETOIL MINE, near BODMIN, Cornwall, the undermentioned

MINE MATERIALS—viz.:

1 66-inch cylinder STEAM PUMPING-ENGINE, with two boilers, about 20 tons, complete
1 Other boiler, about 12 tons
1 21-inch cylinder STEAM PUMPING-ENGINE, without boiler
44 17-inch pumps, 9 feet long
2 17-inch plunger poles, to go 7 feet stroke
2 18-inch cases for ditto
2 Stuffing-boxes for ditto
2 Windbores, ditto
2 H-pieces and doors 2 Door-pieces, ditto
5 12-inch pumps, 9 feet long
1 11¼-inch door-piece
6 11¼-inch pumps, 9 feet long
1 10¼-inch working barrel 1 10-inch ditto ditto
1 11¼-inch windbore 4 9-inch pumps, 9 feet long
1 6-inch windbore
1 13-inch plunger-pole, 9 feet long, stocked complete
1 13-inch case, with stuffing-box attached, complete
1 8-inch plunger-pole, 8 feet long, stocked 1 6-inch ditto ditto
1 6-inch H-piece and door of ditto, door-piece, &c.
1 6-inch case and stuffing-box, complete 1 6-inch ditto windbore
A grinder, and 16-feet water-wheel, complete, with stamps and frames
A large balance-bob, with queen post, gudgeon, plover blocks, strapping plates, holding-down bolts, &c.
Other smaller balance-bobs
A large capstan, with oak axle Other smaller capstans
A shears, 60-feet high Another smaller shears
130 Fathoms 13-inch capstan rope, nearly new
130 Fathoms 12-inch capstan rope
Whims Whim ropes
16 Strapping plates of hammered iron, for main-rods
18 ditto doubled rolled, for ditto
Main rods, staples and glands, rod bolts
Strapping plates Flat-rod pulleys
Railroad iron, tram waggons, air pipes, ladders
Much useful mine timber, old pumps, and various other things

The pitwork, and much of the other materials are nearly new, and in good condition.

Apply to Mr. Henry Thomas, 8, George-yard, Lombard-street, London; Mr. George Geach, Bodmin; or to Capt. Henry Williams, at the mine. 9

Dated June 8, 1847.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.

ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
SIX TUBULAR BOILERS, 11 tons each.
A large IRON BALANCE-BOB, 12 tons.

Application to be made to Capt. R. Williams, on the mines. 10

Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

TO BE SOLD, an excellent double-power BLAST-ENGINE, on Boulton and Watt's principle (38-horse power), fully capable to blow a furnace, and spare blast for a refinery or cupolas. It is in perfect repair, and only to be disposed of in consequence of a larger being required for additional blast.

Applications to be made to Mr. Thomas Rollinson, or Mr. Mark Rollinson, engineers, both of Brierley-hill, Staffordshire. 11

TO BE SOLD.—ONE HIGH-PRESSURE STEAM-ENGINE, of 40-horse power, calculated at 30 lbs. pressure to the inch. This engine is quite new, and very strongly built, having been intended for driving heavy machinery, and is not now required.—For particulars apply to Mr. Matthew Smith, No. 26, Button-lane, Sheffield. 12

TO BE SOLD, BY PRIVATE CONTRACT, the CAST-IRON AXLE of a LARGE WATER-WHEEL, good as new, with TWO CRANKS, BRASSES, &c.—The axle has sockets for 14 arms on each side, and is adapted for having built on it a wheel of 40 to 50 feet diameter, and 5 feet breast, and is capable of any extension of the width of the breast, by the addition of a centre-piece. The whole weight of castings is about 14 tons. The axle lies on the Wheal Betsy Mine, near Tavistock, Devon, and about 9 miles from the navigable River Tamar.

For viewing the same, and further particulars, apply to Mr. Anthony Rowse, Marytavy, near Tavistock.—Tavistock, June 10, 1847. 13

ALBERT ADVENTURE—NOW IN WORK, ON THE COST-BOOK PRINCIPLE.

In 1000 shares.—Deposit 5s. per share. 14

NO FURTHER APPLICATIONS for SHARES will be RECEIVED after WEDNESDAY, the 30th inst.

Applications for shares are to be made to Mr. James Lane, sharebroker, 75, Old Broad-street, London: the Purser, Mr. F. Harvey, Hayle, Cornwall; or the London Secretary, Mr. W. Witcomb, Johnson's Chambers, 167, Fleet-street, London, of whom the prospectus may be obtained.—The prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

COOMBE VALLEY SLATE COMPANY.

OFFICE—5, WHITEFRIARS-STREET, LONDON.

FOR SALE, TWO HUNDRED AND EIGHTY-SEVEN RESERVED SHARES. Price.....£1 15s. 0d. 15

Apply to Mr. Lane, 75, Broad-street, City; Mr. Oliver, Coggeshall, Essex; Mr. Mansell, Guildford; or of the secretary, at the office.—*See* Report in this day's *Mining Journal*.

Also, FIFTY TONS of FIRST FLOORINGS, in the rough, at the quarry price, 1¼d. per foot, sawn and planed; slab for floors, shelves, chimney-pieces, pavings, copings, cisterns, &c., from 2½d. to 6d. per foot—free on board the ship; freight 15s. per ton, to any part of the south coast, or London.—Insurances effected by the company.

WHEAL BEDFORD COPPER MINE.—This VALUABLE MINE is situated about 12 miles from Plymouth, in the parishes of TAVISTOCK and BUCKLAND MONACHORAM, and adjoins that well-known and highly-productive mine, called the Virtuous Lady, and is, in fact, worked on the same lode, from which upwards of 8000 tons of copper ore have been raised from a depth not exceeding 17 fathoms—realising above £50,000. It is held under a lease from his Grace the Duke of Bedford, of which about 14 years remain unexpired, at 1-12th dues. There are several lodes running through these setts, which are nearly a mile in length on the course of the lodes—one only of which has been worked, and which has yielded the above large quantity of ore.

The locality of this well-known concern presents the most favourable appearances to the miner, as the workings will prove, and will bear the inspection of any competent judge. As a speculation, there is not a more promising mine in the neighbourhood; and, from the peculiar advantages of its situation, and possessing a powerful stream of water, with a cast-iron wheel, 28 feet in diameter, and 8 feet on the breast (which cost about £400 from the foundry), and other machinery, sufficient to work the mine to any depth, there is every probability of its shortly being in a profitable state of working—(that very promising and productive mine, Tavey Consols, closely adjoining this mine on the westward). The present proprietor, who has worked the mine principally on his own account, now wishes, from his advanced age, to DISPOSE of FOUR-FIFTHS of the CONCERN, and to retain the other fifth for himself and friends; for which purpose he proposes to divide it into 1024 shares, and offers 820 of them at £3 10s. per share. The mine to be conducted on the Cost-book System. 16

For prospectuses, shares, &c., application to be made to Messrs. Crossman, Sommers, and Co., Original Registry Office, for the Sale and Purchase of Mining Shares, No. 28, Threadneedle-street, London.

WHEAL BEAM TIN MINE, DEVON.—The sett on which this promising MINE is situated, is held under lease from James Woodley, Esq., for 21 years (about 18 of which are unexpired), at the moderate dues of 1-15th, with water-courses included, free of all rates. The sett extends over about 700 acres, and joins the western end of the well-known United Ashburton Consols Mine, from which large returns of tin have been made. The whole of these lodes, comprising seven in number, run through the Wheal Beam sett.

Wheal Beam is in full course of work, and making regular returns of tin—upwards of £6000 value of which has been disposed of. The engine-shaft has been sunk 31 fathoms below the adit level, and the lode opened upwards of 30 fathoms, through tin ground; some of the pitches, in the back of this level, have been set at 4s. in the l., and a good course of tin ore is still going down. The lode now being worked on will shortly form a junction with the granite, when there is every reason to believe that a rich discovery of tin will be made. The lode in the adit level is from 3 to 4 feet wide, and is exceedingly promising. There is a 40-feet water wheel, 4 feet over the breast, with 12 heads of stamps, complete, and in full work, and by which the water, which is trifling, can be kept to a great depth; the floors are admirably situated for cleaning and dressing ores.

The present proprietors, being only four in number, are anxious to work the mine in a more effectual manner, and upon a more extended scale—having hitherto confined their operations to only one lode: they are, consequently, induced to offer one-half of their interest to the public, upon terms which, considering the importance of the sett and the richness of the present lode, must be deemed exceedingly reasonable.

It is proposed to divide the mine (now in 110) into 1770 shares, and to dispose of 885, at £6 per share, of which £1 will be appropriated to the future working of the mine.

The concern is managed and conducted altogether on the Cost-book System.

For shares, apply to Crossman, Sommers, and Co., agents, Mining Adventurers' Subscription Room, and Original Registry Office for the Purchase and Sale of Mining Shares, 28, Threadneedle-street, London. 17

STOCK EXCHANGE.—Under the Sanction of the Committee, the First Publication of the NEW WEEKLY SHARE LIST, with a SUPPLEMENT (to be issued quarterly), will take place on the 3d of JULY next.—Terms of Subscription, payable in advance, 25s. per annum; if by post, 35s. per annum.

Railway Department, June 19, 1847. MIHILL SLAUGHTER, Secretary. 18

ST. JOHN DEL REY MINING COMPANY.—TO BE SOLD, FORTY SHARES in the ABOVE COMPANY, at £7 per share.—Apply to "M. B.," at the office of the *Mining Journal*, 26, Fleet-street, London. 19

SHARES FOR SALE.—FIFTY SHARES in the DURHAM COUNTY COAL COMPANY.—Apply to Mr. Joseph Colling, General Share broker, Newcastle-upon-Tyne. 20

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 21

JOHN TREGONING, MINE SHARES COMMISSION AGENT, *HIGH-CROSS, TRURO.* 22

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,

MATTHEW-STREET, TAVISTOCK. 23

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.* 24

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 25

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES,

18, *THREADNEEDLE-STREET, LONDON.* 26

BUYER in Wheal Trelawny and Wheal Mary Ann, at fair market prices.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KING'S COURT, LOMBARD-STREET, LONDON. 27

MESSRS. WINSTANLY AND CO., SHAREBROKERS, inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed.

6, Bank Chambers, City. 28

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.* 29

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.

CROSSMAN, SOMMERS, AND CO., AGENTS,

28, *THREADNEEDLE-STREET LONDON.*

SHARES FOR DISPOSAL.

Great Wheal Frederick Tin Mine	Wheal Mary and Elizabeth
Devon and Courtenay Consols	Coombe Mine
North Eastern Mining Co. of Ireland	Wheal Rose
South Wheal Maria	Pennant Mining Company
Wheal Susan—Holmbush	Abergwessin Silver Mine
Wheal Rose Consols	New East Crowndale
Wheal Bess Tin Mine	East Wheal Rough Tor
Bedford United Mines	Grambler and St. Anbyn
Alfred Consols	North Wheal Robert
Dartmoor Consols	Great Wheal Rough Tor

30

ASTURIAN MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the REGISTERED PROPRIETORS of SHARES in the ASTURIAN MINING COMPANY will be HELD on Wednesday, the 30th day of June inst., at the company's offices, 9, Austinfriars, for the purpose of receiving the directors' report, and transacting other business.—The chair will be taken at Two o'clock precisely. By order of the board,

9, Austinfriars, London, June 18, 1847. K. MACKENZIE, Secretary. 31

BLAENAVON IRON AND COAL COMPANY.—The INTEREST on the DEBENTURES in this COMPANY, payable half-yearly, may be RECEIVED on application at these offices, on and after the 5th of July, between the hours of Eleven and Three. By order of the board,

Offices, 4, Pancras-lane, June 18, 1847. JAMES BOOTH, Secretary. 32

EUROPEAN GAS COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors will be HELD on Thursday, the 1st day of July next, at the hour of Two o'clock precisely, at the office of the company, 39, Finsbury-circus, London, pursuant to the provisions of the Deed of Settlement.—Two directors retire by rotation, but, being eligible, will be proposed for re-election.

London, June 14, 1847. By order of the board, J. B. GREAVES. 33

TRELEIGH CONSOLIDATED MINING COMPANY.—The directors hereby give Notice, that a MEETING of the shareholders will be HELD at the office on Monday, the 5th of July next, at One o'clock precisely, when the accounts for three months, ending the 30th of June, will be laid before them.

57, Old Broad-street, June 14, 1847. WM. NICHOLSON, Secretary. 34

PATENT GALVANISED IRON COMPANY.—Notice is hereby given, that, in pursuance of a resolution of two special general meetings of this company, held on the 13th and 20th of April last, a CALL of ONE POUND per share (being the sixth) on the new capital of the company, will become PAYABLE at Messrs. Prescott, Grote, and Co.'s, 62, Threadneedle-street, on Thursday, the 1st of July next.—Holders of shares in the said new capital are requested to pay the same accordingly.

S. VINCENT, Secretary. 35

ST. KATHARINE DOCKS.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of the ST. KATHARINE DOCKS, will be HELD in the Dock-house, Tower-hill, in the county of Middlesex, on Tuesday, the 13th day of July next, at 12 o'clock at noon, for the purpose of declaring a dividend on the capital stock of the company for the half year, ending the 30th of June inst.; also, for the election by ballot of 21 directors for the year ensuing; and that the books of the company will be closed on Wednesday, the 28th inst., and opened again on Monday, the 26th of July next. By order of the court,

St. Katharine Docks, June 15, 1847. J. HALL, Secretary. 36

N.B. The chair will be taken at 1 o'clock precisely.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 37

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

BRUNTON'S PATENT ORE-DRESSING FRAME.—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Mary; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 38

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 39

VENTILATION OF COAL MINES.

BIRAM'S ANEMOMETER, FOR ASCERTAINING THE VENTILATION OF COAL MINES.—This INSTRUMENT is now EMPLOYED by many EMINENT ENGINEERS, to whom reference can be given.

For particulars apply to the patentee, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, S. Davis, Derby, manufacturer of Miner's Dials, Pit Barometers, and Safety Lamps. 40

LITERARY NOTICES.

The Philosophy of Geology. By A. C. G. Jousse. London: Simpkin and Marshall, Paternoster-row.

In investigating the great truths revealed to man by the sublime science of geology, he is naturally led to a consideration of the relation of causes to effect, and the result to the mind is, that the regular order and succession of things, and of seasons, is the same as they always have been, and will continue in the same order to all eternity. The author of the work before us (the late editor of the *Journal de Géologie*) carefully examines this doctrine of the eternity of the actual course of nature, and rejects it as erroneous—showing that the idea of causation ought to be founded only upon the invariability of the antecedent and consequent facts in the actual order of Nature. The system of Hutton, that the mineral strata, composing the present continents, were formerly under the sea, and have been formed from the debris of anterior continents—these old continents themselves being the remains of strata belonging to continents still more ancient, and so on *ad infinitum*, is, by Mr. Jobert, completely refuted; as also the arguments of Mr. Lyell, in support of that theory. As a specimen of the style of this ingenious work, we quote the following passage on space:—"Through our unassisted sight we discover in the depth of the heavens innumerable stars; the telescope, multiplying the power of our eyes, shows us beyond these nearer globes—others whose embedded light appears to melt in the distance; imagination, under the guidance of analogy, leads us to suppose beyond these, other worlds again, whose light, lost in immensity, will never reveal to us their real existence; and beyond these we still picture another more distant range, and worlds without end, in the same manner as we conceive series of numbers, to which we can add other numbers without limit. Such is the philosophical idea of infinity attached to space; if imagination placed a limit beyond which, worlds do not exist, it would still suppose the existence of light, or of some fluid, on which to settle itself; for, if you subtract entirely from the idea of space or extensiveness, the idea of matter then remains nothing which could serve as a basis for an idea." The work is well worthy the attentive perusal of the geologist.

The Steam-Engine, from the Earliest to the Present Time—Atmospheric Railways—Electric Printing Telegraph—and Screw Propeller. By E. Portwine. London: E. Appleyard, Farringdon-street.

This is a useful little work, most admirably adapted to give to the uninitiated in the steam-engine, electric telegraph, the principle of atmospheric traction, and other philosophical machines, a clear insight into their mode of construction, and the means by which their operations are regulated and controlled. In his Preface, the author truly observes—"Stand on the deck of a steam-boat—rush through space propelled by steam or atmospheric pressure—gaze on the mysterious electric printing telegraph—or witness the beautiful evolutions of a screw vessel—have a thousand companions with you, and how many will you find that can inform you the variety of steam-engine you are propelled by? Atmospheric pressure, electricity, and the operations of the screw, are all inexplicable to the majority." It is this consideration which has induced the author to produce a description which the masses can understand: a pocket manual which, while it will cheer the time employed in steam-boat or railway travelling, will impart that instruction on those popular subjects—a knowledge of which, in these days of the growth of science, it is almost disgraceful to be without. The author has, as much as possible, avoided technicalities, and has produced a work full of useful and pleasing information.

RECENT AMERICAN PATENTS.

[*Concluded from last week's Mining Journal.*]

Improvement in the Stop-cock, or Faveet; T. C. Clarke, Philadelphia, Pennsylvania, March 14.—Claim,—"What I claim as my invention and improvement, and desire to secure by letters patent is, the introduction of a perforated valve, in combination with the main valve, for the purpose of more gradually stopping off the water, or other liquid, thereby preventing or lessening the liability of pipes bursting from the reaction of the stream when a strong head of water is too suddenly stopped off, as in the case in the common cock or faucet."

Improved Compound for Cements, and other purposes: W. Yates and D. Dolan, Manchester, England, March 14.—The patentees say—"The nature of our invention consists in the formation and compounding of a peculiar cement possessing the power of resisting fire and water, and also possessing a tenacity which renders it applicable to many useful purposes."

Claim.—"We claim as our discovery, or invention—first, the introduction of the tannin principle as an ingredient in our cement, as described; and second, the mode of compounding such cement by pulverising the portion containing the tannin principle, and the portion containing the gluten separate, and blending or mixing the two portions in a dry state, as described. We do not confine ourselves to the proportions mentioned, though we have found them to answer in practice for general purposes."

LEMONNIER, HAIR-WORKER to the Queen, and Member of the Academie de l'Industrie, and who obtained a Silver and Platina Medal at the Exhibition, has just INVENTED several NEW DESIGNS, as Palm Trees, Wreaths, Knots, and Cyphers, which he executes with hair in its natural state, without using gum or other cement. A variety of Trees executed by a mechanical process.

No. 13, RUE DU COQ SAINT HONORE. PARIS. 41

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.

By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps. 42

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.
Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 3s. 6d., in Post-office order or stamps,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on those Secret Infirmities and Disorders of Youth and Maturity that are usually acquired at an early period of life, which tend to destroy physical and mental energy, ardour, passion, and all the attributes of manhood. Illustrated with twenty-five coloured engravings, on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and showing the injuries that are produced in them, by solitary habits, excesses and infection. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c. 43

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

Published by the author; and may be had from Kent and Richards, 51 and 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 148, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by all booksellers.——At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c. The work may be had direct from the author's residence, and will be forwarded, free by post, to any address for 3s. 6d. in postage stamps.—9, Bedford street, Bedford-square.

The Nineteenth Edition, price 2s. 6d.; free by post, 3s. 6d.

THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane, Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London. 44

Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and who are found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all cases of constitutional or acquired debility; by its use the whole system becomes restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s.

THE CONCENTRATED DETERSIVE ESSENCE.—An anti-syphilitic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, or secondary symptoms. Price 11s. and 33s. per bottle; also 55 cases.

PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, cassiva, and other deleterious drugs, and may be taken with safety without inconvenience or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 1s. 9d., 2s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend*.—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street, Oxford-street, London, daily.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Western Scientific Institute	Leicester-square	Monday	8½ P.M.
Statistical	12, St. James's-square	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Tuesday	8½ P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	8½ P.M.
Microscopical	21, Regent-street	Wednesday	8 P.M.
Royal Society Literature	4, St. Martin's-place	Wednesday	4 P.M.
Philological	Lond. Lib., 12, St. James's-sq.	Friday	7 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.

GEOLOGICAL SOCIETY.

MAY 12.—LEONARD HORNER, Esq., (President) in the chair.

"On the Nomenclature of the Fossil Chimæroid Fishes," by Sir P. G. Egerton. The author divides this family of extinct fishes into four genera, and pointed out the characters by which they are distinguished, and the geological formations in which they occur.

"On Kent's Cavern, Torquay," by E. Vivian, Esq. This paper gave an account of some recent researches made in it by the Torquay Natural History Society. In one place the committee found a layer of dark mould, containing burnt wood or charcoal, with recent shells and bones, resting on the floor of stalagmite; and below this, a solid bed of red marl, full of broken bones, and teeth of extinct animals. In another place, below a floor of stalagmite, which was carefully swept, and seemed never to have been disturbed, they found the same red loam, with many bones much decayed, and a flint knife. In a third place, where the stalagmite was about 1 ft. thick, the same loam contained a bed of fossil teeth, principally of the hyæna, many fossil bones, and among them another very perfect flint knife. The author thinks that the cave was first inhabited by bears, hyænas, and other carniverous animals, by whom many of the bones were carried into the cave; that these, by means of a flood, were mixed with the red loam, and that men subsequently inhabited the cave, leaving the flint knives now found. Then came a third period, in which the stalagmite was deposited; and, last of all, that period in which the British remains found above the stalagmite were deposited in the cave.

MAY 26.—"Notice of the Discovery of Coal on one of the Islands near the Coast of the Malay Peninsula," by J. R. Logan, Esq., communicated by Prof. Anstead. The coal has been found by a Penang Siamese, on the southern coast of the Island Junk-Ceylon (well known for its tin), near the bank of a river 200 or 300 ft. from its mouth. It is of a black or brownish-black colour, burns with a clear flame, and appears very bituminous. The man stated that there was a layer of it 3 ft. thick, close under the surface, and offered to import it into Penang at 12s. 6d. per ton.

"On the Structure and probable Age of the Bagshot Sands," by J. Prestwich, jun., Esq. The author described the general features of this formation in the vicinity of London, where it forms wild, thinly inhabited districts, with barren flats and ranges of heath-covered hills—it exhibits few good sections, and fossils are very rare. These sands extend more widely than has been generally supposed, from Esher and Claremont on the east, to Strathfieldsaye on the west, and from near Farnham on the south to Wokingham on the north, and they also appear on the summit of the Hampstead and Highgate hills. The age of this formation has long been a problem in geology, but the author thinks he has collected sufficient testimony to decide the question. He devides the Bagshot sands into three divisions, each with its peculiar group of organic remains. The lowest consists of fine light yellow sands, occasionally argillaceous, with mere traces of animal remains, and a few impressions of plants. It varies from 100 to 150 ft. in thickness, and rests conformably on the London clay. Above the sands are from 40 to 60 feet of brown liver-coloured or whitish clays and greensands, with frequent vegetable impressions in the clays, and occasional beds of lignite. Incumbent on this, is the upper main mass of the Bagshot sands, with fewer argillaceous layers, and composed chiefly of irregular beds of light yellow sand. It contains small iron-stone concretions, and blocks of saccharine sandstone 10 or 12 ft. across, and 3 to 4 ft. thick, which are sought for by dipping through the gravel with iron rods—the thickness of this division is 250 to 300 ft. In the lower division, the author finds no fossils; but, from the second, he has procured several; and, of 10 determinable, and described species of shells, all occur also at Bracklesham; only one, or at most two, in the London clay, and two or three in the Barton clays. The fossil fishes from this division, as the Edaphodon of Sir Philip Egerton, the teeth of sharks and other remains, also agree with those from Bracklesham. The upper division yields a few fossils, all of eocene form, but less decisive as to the particular division. From the whole evidence, Mr. Prestwich considers the Bagshot sands as the equivalents of the rich fossiliferous beds of Bracklesham, of the central vertical strata at White Cliff Bay, and of the central variegated and light-coloured sands of Alum Bay; and, at all events, older than the freshwater series. Hence, also, they are correlated to the lower part of the Calcaire Grossier, and the Glauconie Grossière of the French tertiaries; and occupying a low place in the eocene series, form an uninterrupted sequence to the London clay, and in perfect conformity with the progressive development of the marine strata of the Hampshire tertiaries.

INSTITUTION OF CIVIL ENGINEERS.

JUNE 15.—Sir JOHN RENNIE (President) in the chair.

The paper read was "On the Law which Governs the Discharge of Elastic Fluids under Pressure, through short Tubes and Orifices," by W. Froude, M. Inst. C.E. The subject of the paper admitted of a much longer communication than could be read at one meeting, and the train of reasoning was such as could scarcely be perfectly entered into on merely hearing it read; nor is it possible, within our limits, to give a complete analysis of a paper, which, for accuracy of perception, closeness of reasoning, and terseness of diction, has rarely been equalled in any scientific society. A succinct review of it must suffice. The law proposed was a modification of that which has been usually assumed—viz.: a simple application of that which holds good with respect to non-elastic fluids; this law is, generally, that the velocity of issue is directly as the square root of the pressure, and inversely as the square root of the density; but this law neglects wholly the reaction that must arise from the expansion necessarily taking place in the course of issue. The nature of the action was illustrated by the following example:—If a balance be supposed, with an equal weight in each scale, one of the weights being a spiral spring, like that of a spring balance compressed lengthwise with its axis vertical, and held in a state of compression by a cord. Now let the cord be suddenly reversed, so that the spring is enabled to extend itself vertically; the scale in which it stands will obviously be depressed, the spring reacting on it as it expands upwards, and continuing to press till wholly relaxed; or if the scale in which it stands were ascending by a preponderance given to the other scale, the rate of its ascent would be in the same way retarded. The amount of the retardation would depend on the strength and the weight of the spring, and on the length to which it would extend itself when released. Now in the discharge of an elastic fluid, there is an action, strictly analogous, operating continuously, however, instead of *per saltum*, the strength and weight of the spring being represented by the elasticity and density of the fluid, and the length to which it would extend itself by the degree of expansion, in the course of issue. The reduction in quantity of discharge, due to the action, was to be measured by the velocity imparted by expansion, to each particle of the elastic fluid in course of issue, the velocity of each particle after expansion, would be its velocity before expansion, multiplied into the rate of expansion, and the primary force must be subdivided in generating each additional unit of velocity, so that the portion applicable to the generation of velocity before expansion, would be the whole force divided by the rate of expansion; thus, the velocity before expansion would be divided by the square root of that rate. For instance, an elastic fluid expanding four times in course of issue, would be discharged with only half the velocity of a non-elastic fluid, under the same circumstances of pressure and density. This modification was shown to fulfil the general dynamical law "that a given force, acting for a given time, will produce a given momentum, whatever be the weight of the mass acted upon." This seemed to be the essence of the law for non-elastic fluids, but it was disregarded by the unmodified application of that law to elastic fluids, in which there would be a great accession of velocity, of particles issuing under a given pressure, without any reduction of quantity discharged in a given time; if, however, the quantity be reduced as proposed, in the ratio of the square foot of the density, and the velocity be accelerated in the same ratio—the final momentum would be the true equivalent of the pressure. This, in its practical application, explained what was inexplicable by the ordinary theory; the difficulty experienced from the back pressure of the waste steam in locomotive engines, and a diagram was given, showing, that at 60 miles per hour, this would be at the least equivalent to 8 lbs. per inch throughout the stroke, thus showing a loss of nearly 50 H. P. As applied to the case of air, discharged into an exhausted receiver, the result was highly curious. The rate of discharge, instead of increasing throughout as the degree of vacuum was increased, would be maximum at 15 in. of vacuum, although nearly uniform for many inches above and below that point; it would, however, progressively decrease above that point, because the expansion would increase in a higher ratio than the pressure, and ultimately, at the point of perfect vacuum, it would be at a minimum (indeed stationary, were air perfectly elastic), because at that point the expansion would be infinite, but the pressure only finite—viz.: 30 in. of mercury. Experiments made, by permission of Mr. Brunel, with the South Devon Railway atmospheric apparatus, confirmed the theory. The line traced by an indicator apparatus was shown to accord very closely with one traced by this theory, whilst it was widely at variance with the rest of the ordinary theory.

After the meeting, Mr. Lambert exhibited his flexible diaphragm water valve, which was intended to remedy some of the defects of the plug-cock. It avoided the leakage, and necessity of repairs; there was apparently no friction, and appeared very durable, and well calculated for the newly introduced system of constant pressure.—We shall give a drawing and description of Mr. Lambert's Valve, in next week's Journal.

The paper announced to be read at the next meeting, Tuesday, June 22, was "A review of the Plans which have been Proposed for Connecting the Atlantic and Pacific Oceans by a Navigable Canal," by Joseph Glynn, M. Inst. C.E.

DESCRIPTION OF A NEW METHOD OF OVERCOMING AN INCLINE OF 1 FT. IN 12, WITH A NEW LOCOMOTIVE REVERSING STEAM-ENGINE.—In addition to the small wheels keyed on the axle outside of the usual large wheels of locomotives, and connected by connecting-rods, Mr. Erskine has a toothed pinion on each side of the engine, dropping down betwixt the flange of the small wheels and the large wheels, which, on the locomotive coming to a steep incline, say 1 ft. in 12, works into strong pins or bolts, fixed on the inside of the raised rail. The engine and carriages all the while running on the small wheels, by which their whole weight is borne, and the large wheels acting as fly-wheels, leaving the toothed pinions nothing to do but to work in gear with the pins or bolts, thereby effectually preventing slipping. It was shown, by a beautiful working locomotive of about 9 lbs. weight, made by Mr. Erskine, and fitted with his reversing pivot valve, that by this means it easily ascended an incline of 1 ft. in 10; and on an incline of 1 in 16, the small wheels themselves, without the toothed pinion, easily accomplished the ascent; whereas the engine could not attempt the ascent with its ordinary larger wheels. It was stated that this is not the first time a rack and pinion has been proposed on the inclines of railways, but that it has never been proposed in the way now done by Mr. Erskine, by whose method the power is so vastly increased by being brought to act so near to the centre of the wheel.—D. ERSKINE: *Trans. Royal Scottish Society of Arts.*

ASTONISHING CURE OF A VERY BAD LEG, OF THIRTY YEARS STANDING, BY HOLLOWAY'S PILLS AND OINTMENT.—The wife of Mr. George Bourne, butcher, of Stockton-on-Tees, suffered for full 30 years with a dreadful bad leg, apparently originating by the bursting of a vein internally. The pain was intense—the most eminent medical men in the neighbourhood tried to cure it, but in vain. At last she was induced to try Holloway's pills and ointment, when, to the astonishment of herself and all who knew her, the leg, in the course of eight weeks, was thoroughly healed and cured, and has remained sound and free from pain for the last nine months.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London. 45

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

TUESDAY.....Norwich Union Reversionary Interest Company—offices, at One.
WEDNESDAY...Minerva Life Assurance Company—offices, at Twelve for One.
THURSDAY.....Canada Company—offices, at One.
Law Life Assurance Company—offices, half-past Eleven.
Rhymney Iron Company—offices, at Two.
FRIDAY.....Thames Haven Dock and Railway—Guildhall Coffee-house, at One.
Western Gas-Light Company—George and Vulture, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

According to announcement, an extraordinary general meeting of the shareholders was held at Dee's Royal Hotel, Birmingham, on Saturday last, for the purpose of considering the conduct of the directors with reference to the proposed sale of the line to the Great Western, and of considering the propriety of instituting a suit or suits in equity, or of instituting such proceedings in or out of Parliament as might be deem advisable.—P. H. MUNTZ, Esq., the chairman of the board of directors, presided, and was supported by Mr. Russell, M.P., Mr. Barlow, and other directors of the Great Western Company.

The SECRETARY having read the resolution by which the meeting was convened,

Mr. MOZLEY said, he was happy to announce, that he believed the proceedings of the present meeting would not occupy any great length of time. He regretted that a committee of the House of Commons had refused to allow the shareholders a hearing of their case; and he regretted this the more, because the course adopted, and of which they had right to complain, was taken upon objections suggested by the trustees of their own property. (Hear, hear.) The House of Lords had, however, done them greater justice: the Standing Orders Committee had decided that the orders had not been complied with; and that before the bill now before Parliament should be further proceeded with, it should be brought before the shareholders for their approval or disapproval. He should, therefore, content himself with moving the following resolution:—

"That, inasmuch as this meeting is informed that the Standing Orders Committee of the House of Lords have decided that it is the duty of the directors to lay the bill now before Parliament for amalgamating this company with the Birmingham, Wolverhampton, and Dudley Railway Company, and selling the united undertaking to the Great Western Railway Company, before the shareholders (under the order known as Lord Wharncliffe's order), this meeting deems it right, from respect to the House of Lord, to adjourn, in order to afford the directors an opportunity of submitting the aforesaid bill to the shareholders, or taking any other steps in conformity with the resolution of the Standing Orders Committee; and it is accordingly resolved, that this meeting is adjourned until Saturday, the 19th inst., at Dee's Royal Hotel, Birmingham, at 2 o'clock in the afternoon, and that the further consideration of all and singular the matters mentioned and referred to in the requisition of the shareholders of the 29th of April, 1847, be adjourned unto, and be resumed, if necessary, at such adjourned meeting."

He (Mr. Mozley) hoped, that the meeting would think with him, that this was the most proper course to be adopted, as it was in strict compliance with the expressed wish of the House of Lords. The directors would now have time to reconsider the matter, and he was not without hope, that in the interim, some means might be suggested by which the unseemly and expensive contest in which they were engaged might be terminated. He (Mr. Mozley) was not prepared to say, that some arrangements might not be made by modification of the bill now before Parliament, which would satisfy the great body of the shareholders, and meet the object which the Legislature originally had in view. (Hear, hear.)

Mr. PARSONS seconded the motion, and being put by the Chairman, it was carried unanimously. The meeting then adjourned until Saturday next (this day.)

ARBROATH AND FORFAR RAILWAY.—The annual report of the directors states, that the traffic on this line has very much increased within the past three years; in the year ending the 15th April, 1847, it amounted to 11,559*l.*; in the year ending April, 1846, to 10,075*l.*; and in April, 1845, to 8976*l.* It is expected that the traffic of the next year will exhibit a more gratifying result, because of the recent opening of the Dundee and Perth Railway, and of the anticipated opening in August of the Aberdeen line as far as Brechin and Montrose. The expenditure for the past year amounted to 6379*l.*, leaving a profit of 5196*l.*, which, after paying a dividend on the guaranteed stock of 5 per cent., leaves a profit for the holders of the original and unguaranteed stock of 4 per cent.

BOSTON, STAMFORD, AND BIRMINGHAM RAILWAY.—At a special meeting of shareholders, held at the offices, Abingdon-street, on Monday—T. MACAULAY, Esq., in the chair.—The following bills were submitted and approved:—To make a railway from Peterborough to the Stamford and Wisbech branch at Thorney; a railway from Wisbech to Wisbech Harbour, and to construct works in the harbour; a branch from Wisbech to Sutton-bridge, and another to Sutton St. Mary, and to improve the harbour at Sutton-bridge; also to enable the Great Northern Railway Company to lease or purchase the East Lincolnshire, the Boston, Stamford, and Birmingham, and the Ambergate, Nottingham, and Boston Railways.

CALEDONIAN RAILWAY.—We understand that it is intended to open the first 40 miles of this line from Carlisle to Beatock, on the 1st August next, and the Wishaw and Coltness, and Glasgow and Garnkirk, will be opened on the same day, with about six miles at the northern end, leaving only 40 miles to travel by coach between London and Glasgow, which will be probably opened from Beatock to, say, three miles north of Lanark, 30½ miles, on 1st March, 1848; and the Edinburgh branch, 27½ miles, on Oct. 1, 1847. The character of the "navies" on these works has undergone a complete reformation; many have been taught to read and write, and a great number of them are located in mud and turf huts, with glass windows, and well ventilated, built in squares or terraces, for which they pay a small weekly rent. Crime and drunkenness have greatly diminished.

CEYLON RAILWAY COMPANY.—The first general meeting of the shareholders in this company was held at the London Tavern yesterday, the 17th inst. The report stated that the Governments, both at home and in Ceylon, fully appreciated the importance of the undertaking, and that they evinced a strong disposition to assist in its promotion; the cost would be about 850,000*l.* from Colombo to Kandy, and the Government would give a free grant of the land, on a lease of 99 years. From the accounts, it appeared that the receipts from calls had been 33671*l.*, and payments, 4909*l.* 7s. 1d.; leaving a balance of assets of 4077*l.* 12s. 11d.

WEST FLANDERS RAILWAYS.—We observe the following in the *Journal de Bruges* of the 2d May:—"The activity shown by this company to complete the works of this undertaking is unexampled and most praiseworthy, and the directors are alike entitled to the approbation of the shareholders and gratitude of the inhabitants of the province for the line now in execution, and for the liberal manner in which they have given employment to the poor during the winter; and it is satisfactory to know that the works then executed have not suffered in the slightest degree. We had no sooner witnessed the successive openings of the Thourout, Roulers, Lichtervelde, and Iseghem sections, than we were again called to assist, on the 21st inst., at the inauguration of a further portion to Ingelmunster; and we understand that the entire line from Bruges to Courtrai will be open for traffic in the course of the ensuing month. This accomplished, we shall be enabled to appreciate the value of Railways in Belgium under private management."

THE WOLVERTON ACCIDENT.—It is said that this accident will cost the company from 20,000*l.* to 30,000*l.* The policeman who was committed for trial on a charge of manslaughter, was accompanied to prison by the female to whom he was shortly to have been married. Complaints were made to the coroner, that the bodies had been robbed of all the money they had in their possession; he promised an investigation.

THE TRENT VALLEY RAILWAY—PROVIDENTIAL DISCOVERY.—For some days past, apprehensions have been entertained by the engineers and contractors of the railway, as to the safety of the bridge which crosses the Tame near this town, and a man was appointed to watch the progress of any defect which might be observable in the structure, either from subsidence or other causes. This bridge consists of three divisions of about 70 ft. span, supported by two piers in the bed of the stream, the line being formed by iron girders, and the whole being constructed on a principle precisely similar to the bridge over the Dee, on the Chester Railway, where the late melancholy accident occurred. It appears that the doubts entertained as to the stability of the structure did not originate without sufficient cause, as, on Mon day last, the man appointed to watch the bridge perceived that one of the immense iron girders was giving way. The circumstance was immediately reported to the officers of the company, and measures will no doubt be taken, not only to repair the fracture, but to ascertain the perfect stability of the work, before the opening of the line for traffic. On the whole, it is a matter of congratulation that the state of the bridge was discovered thus early, as, had it given way during the passing of the trains, the consequence would have been frightful to contemplate.—*Birmingham Jour.*

ST. LAWRENCE AND ATLANTIC RAILWAY.—We are glad (says a Montreal journal) to announce to our readers that ground has been broken at St. Hyacinthe, for the commencement of the St. Lawrence and Atlantic Railway, at that place. This event took place on Monday last, in the ground immediately adjoining the college, and was hailed with many manifestations of joy by the inhabitants, and especially by the students.

FRENCH RAILWAYS.—We find the following in the *Journal des Chemins de Fer*:—"The committee on the bill relating to the Paris to Lyons Railway has heard explanations from M. Julien, the chief engineer of the company, on the estimates which he had given in his report, read at the last general meeting of the shareholders. It is said that the committee is inclined to modify the terms of the bill. Several members are thought to be disposed to reduce the penalty of 24,000,000 to 16,000,000, in order to obtain from the company an expenditure in works superior to the sum of 10,000,000 set forth in the bill. Although this concession would be far from compensating, to the company for the unfavourable position in which it has been placed by the errors committed in the estimates of the Government engineers, still it would permit the company to wait for a year the course of events, without the fear of an overwhelming penalty having to be paid in case the works were not eventually to be proceeded with. The committee on the Lyons to Avignon bill also pursues its inquiries. The representatives of the company have been heard, and have declared that they only waited for the adoption of some definite measure in their favour to commence the works. The Minister of Public Works has visited both committees, and does not appear disposed to oppose any modifications that it may be deemed useful to make in the bills."

NEW PATENTS.

J. Wilcock, Barnsley, York, for improvements in the ventilation of mines.

W. B. Johnson, Manchester, engineer, for certain improvements in the construction of locomotive engines, to be used upon rail or other ways, which improvements are also applicable to carriages used upon railways.

J. Johnson, Bradley, Stafford, iron-founder and boiler-maker, for improvements in machinery for the manufacture of rivets, railway or other pins, bolts, nuts, and spikes.

G. E. Donisthorpe, Leeds, York, manufacturer, for improvements in roving and spinning wool and flax, and in treating wool previous to spinning, and in heckling flax.

J. Richards, New York, engineer, for improvements in constructing pistons.

F. B. Stevens, Hoboken, Hudson, New Jersey, United States of America, for improvements in applying means and apparatus to ships and vessels to improve their speed.

Henry Pooley, Liverpool, ironfounder, for certain improvements in weighing-machines.

J. Lane, Oriel-street, Lpool, brewer, for improvements in railway carriages and engines.

R. Roberts, Manchester, engineer, for improvements in machinery for preparing and spinning cotton and other fibrous substances.

J. T. Chance, Handsworth, Stafford, glass manufacturer, for improvements in the manufacture of glass. (Being a communication).

J. L. Higgins, Esq., Oxford-street, Middlesex, for improvements in the construction of winches and windlasses.

F. T. Philippi, Bellfield Hall, Lancaster, calico printer, for certain improvements in machinery or apparatus for stretching, drying, and finishing woven fabrics.

A. Symons, London-street, Fenchurch-street, merchant, for improvements in railway carriages, in preventing accidents on railways, and in ascertaining the speed of carriages.

J. Houghton, Oldham, Lancaster, engineer, for improvements in machinery or apparatus to be used in the preparation and spinning of cotton, wool, and other fibrous substances.

J. Mercer, Oakenshaw, and J. Greenwood, Church, both of Lancaster, chemists, for improvements in certain substances applicable to the manufacture, scouring, and washing wool and woollen fabrics and other substances.—*Mechanics' Magazine.*

REPEAL OF THE COPPER ORE DUTIES.

[Continued from the Mining Journal of the 5th June.]

Sir C. Lemon states that, in the year 1839, the import of metallic copper in ores from Chili was 2385 tons, and he shows a steadily and largely increasing import up to 1843, when it amounted to 5589 tons. In 1844 it was 5287; and in 1845, when, as we have explained, the effect of the duty would be likely to show itself in a diminished import, it war 3622 tons.

Here there is evidence of a steadily and largely increasing trade up to the year 1843, the increase in which year, as compared with 1842, was upwards of 2000 tons of copper. In the natural course of things, there would have been a larger import in 1844 than in 1843; but no—it had received a check, and had slightly diminished: in 1845 it was 2000 tons less than in 1843, and 1600 tons less than in 1844.

Is there not here sufficient evidence of the working of the duty? What else could first have checked this steadily increasing trade, and then turned its current backwards?

But Sir C. Lemon says, that the diminished import in 1845 "arose from two causes, both of them accidental and temporary; the one being, that "the import of the year before was so large;" and the other, that the extraordinary dryness of several successive seasons, "in the district of the mines, five years, including 1844, having passed without a drop of rain," had deprived the mules, on which the ores are conveyed to the coast, of their usual supplies of provender, and that the ores were in consequence left at the mines.

Now, the two causes, which are stated to have combined to produce this result, are not only perfectly unfounded in fact, but they are also contradictory of each other, and are contradicted by the evidence of Sir C. Lemon's own figures.

In the first place, the import in 1844 was less than in 1843; and it appears, moreover, rather an extraordinary reason to assign increased means of production, as evidenced by the results of the operations of several successive years, as the cause of a diminished produce.

In the next place, how did it happen that under this extraordinary deprivation of rain for five years, including 1844, the import had rapidly increased in every year, up to 1843, and why was the whole result of these five years of drought to fall on 1845?

Had Sir C. Lemon been acquainted with the countries in respect of which he makes such confident assertions, he would have perceived the absurdity of his statement.

There are many of our number who are well acquainted with Chili, and some who were residing in that country during the period alluded to; and we confidently assert, that such a state of things as that represented by Sir C. Lemon did not exist, and that such a circumstance as the absence of rain for five years in the mining districts of Chili has never been known.

But Sir C. Lemon states, that in 1846 the import is computed to have been 6000 tons of copper. It is very easy to prove that this estimate is enormously exaggerated. The statement which he has published (page 18), of the copper ores sold at Swansea in 1846, shows that only 7721 tons of Chili ores were brought to that, their chief market, within the year; the imports into Liverpool, &c., not sold at ticketings, appear to have amounted to about 5500 tons of ore; making a total import of from 13,000 to 13,500 tons of ore, which, at 25 per cent., would contain rather less than 3500 tons of copper; even at 30 per cent., which is about the average produce of the imports of the two previous years, the contents in copper would not exceed 4000 tons: and yet Sir C. Lemon states that the import was 6000 tons! Truly, he should have looked with more care to the accuracy of his own statements, whilst accusing others of carelessness and exaggeration.

We apprehend it will now be admitted that we have established that there has been a large falling off in the import of foreign copper ores, subsequent to and consequent on the imposition of the duty. We have elsewhere given proof of various other circumstances tending to establish the fact, that the change in the law made in 1842 is transferring to other countries the smelting of foreign copper ores, and the advantages attendant on their import, hitherto almost exclusively enjoyed by this country. We allude to the resumption of smelting with wood in Chili; the establishment of works upon the English principle in that country, producing a quality of copper quite equal to the English; the establishment of smelting-works in the United States, and the sending of copper ores to France, Sweden, Holland, Belgium, and Hamburgh, for the purpose of being smelted; all circumstances without a parallel previous to the imposition of the duty. We have also given proof of the falling off in our exports of copper to France and India, our two largest foreign markets, the natural consequence of the diminution of the production of copper in this country, and the increase in the production of that metal in South America and elsewhere.

Sir C. Lemon would have your lordship believe that the smelting of copper in Chili has never been checked, but, on the contrary, that it has been constantly increasing. It is easy, however, to demonstrate that such is not the fact. Capt. Basil Hall, in his work on Chili and Peru, written whilst stationed in those countries, in the years 1820 to 1822, states, in reference to Chili, that "the average produce of copper in one year, has lately risen to more than 60,000 quintils," or about 2700 tons. Mr. MacGregor shows, that in 1839, nearly 20 years afterwards, the produce of copper was just the same—2700 tons, there being also an export of copper, in ores, about equal in amount; and in 1844, when the smelting of copper had been resumed to a considerable extent, the produce was under 2000 tons of bar copper. (See statement, page 31 of Parliamentary return). And since that period, we have evidence of the establishment of two works on the English principle, one at Conception, and the other at Coquimbo, which are already producing about 2000 tons of refined copper annually, which works are quite independent of the native smelting, of which the previous make of copper entirely consisted.

Sir C. Lemon, whilst admitting that there has been a falling off in the copper trade of this country, has endeavoured to establish that it has been chiefly the result of a decrease in the production of the Cornish mines; and for this purpose he has contrasted the produce of the whole of the Cornish mines in 1846, as compared with the preceding year, with that of a single mine in Cuba, in the same period; showing a decrease of 12,126 tons of ore in the Cornish mines, and of 7986 tons of ore in the Cobre Mine.

Sir C. Lemon is of opinion that the smelting of copper in Chili, so far as it is dependent upon English coal, can never arrive at any magnitude, because it must depend upon the chance arrivals of cargoes of coals from England; although he admits that as the trade in guano, &c., increases, the shipment of coals from this country to South America is likely to extend, and become more regular. The supply of coal is, however, by no means so uncertain and irregular as Sir C. Lemon supposes. The proprietor of the copper works recently established at Coquimbo, has sent orders to his agents in England, to send him 600 tons of Swansea coals per month, which coals cannot cost him more than 30s. per ton at Coquimbo, at the highest rate of freight; the chance supplies may be frequently obtained considerably lower; in 1846, English coals were selling at Valparaiso, at 17s. per ton on board. The Conception coals are worth, at Valparaiso, about 14s. per ton; of course their cost is considerably less at the mines, where, as we have mentioned, copper smelting is in active operation. A law was passed about a year since, exempting coals imported for smelting purposes from duty; and the new works at Conception are invested with additional privileges, in exemptions from duties of various descriptions, in consideration of their employing native coal, which they do exclusively; and, although it is true, as stated by Sir C. Lemon, that this coal is not equal in quality to the English, yet the inferiority is not so great as to render it unfit for smelting purposes, for which it proves, when mixed with wood, well adapted.

Sir C. Lemon endeavours to make out that the duty is only equal to 9 per cent., and says, "It is hardly worth while to notice the statement, that the duty on copper ore imported equals 25 to 28 per cent. of its net value;" which statement was correct at the time it was made, although, at the price of copper ores at this moment, the ratio of duty on the net value is only 22 per cent.

Sir C. Lemon alludes only slightly to the falling off in the exports of copper from this country, which he admits as regards France, but explains that it must arise, not from other countries being supplied from other sources, but because the diminished production of copper in England did not admit of the same extent of export as in previous years; if the same quantity had been exported, enough would not have been left for our own manufactures; a very extraordinary mode, truly, of getting over the difficulty. How does he suppose the countries which have been left unsupplied by England have procured their usual consumption of copper? The inevitable result of an inadequate supply would have been an advance in prices. But has such been the case? The exports to France and India have decreased considerably. But there has been no extraordinary rise in prices in those countries; on the contrary, their prices have averaged rather less than those current at home. And they have certainly not ceased to consume copper; in fact, their consumption has been on the increase. How is this state of things to be accounted for, except by the conclusion, that they have been supplied from other sources? and that this is the case, abundant evidence has been given.

We need only allude to the statement which has been laid before Government, that three manufacturing houses in France, heretofore constant customers of the English smelters, purchased in 1846 no less than 1600 tons of Chilian and Peruvian copper; and the following statement of imports into England of Chilian bar copper, the whole of which was re-exported, shows the extent to which our foreign trade is being interfered with:—

In 1842 the import was	.....	309 tons.
1843	.....	127 "
1844	.....	1401 "

We subjoin a statement of the total exports of copper from England, and also of the quantities sent to France and India (the two largest markets), during the last six years, in order to show how the falling off in our exports of copper has kept pace with the decrease in our imports of copper ores:—

Years.	Total exports.	To France.	To India.
1840	*Tons* 15,204	5806	4149
1841	16,013	6646	3602
1842	19,408	7784	5652
1843	17,777	5085	6125
1844	18,843	5150	6985
1845	18,039	6350	4722
1846	14,261	4636	3171

Sir C. Lemon admits that they have abundance of good coal for smelting in the United States; but he lays great stress on its distance from the coast, and the great expense of conveying it there. It is true, that at present their means of conveyance are incomplete, but in Maryland and Pennsylvania, the Baltimore and Ohio Railway, and the Chesapeake and Ohio Canal, are nearly completed, penetrating the heart of the bituminous coal districts; and when these great works are accomplished, the difficulty will be removed. The anthracite coal-field is within a short distance of Boston; and though this description of fuel has there for the first time been applied to copper smelting, we have been led to believe that the application has perfectly succeeded. That 25 per cent. (or one-fourth) of the produce of the ore is lost, as stated by Sir C. Lemon, in quite impossible; there is no novelty in the processes employed, the blast-furnace being used with advantage with the peculiar description of fuel (anthracite) which they smelt with.

The Americans are working several copper mines in Cuba, and are devoting much attention to the copper ores in that island, which is in the vicinity of their coasts, and with which they have extensive commercial relations. Letters have been placed in the hands of the Chancellor of the Exchequer, showing that American houses have made proposals to the Cobre Mining Company, to give them for their ores, delivered in the United States, prices equal to those obtained at Swansea, by which they would avoid the duty, and would effect a considerable saving in the freight, which to the United States is only half that now paid for the conveyance of the ores to England. The Cobre Company have, as has been shown, strong inducements for bringing their ores to this country; but in the state of depression to which those mines have been reduced, it is impossible to doubt that the temptations held out by the Americans will not be much longer resisted, if the hope which they have hitherto entertained of the speedy removal of the duties is not soon realized.

But Sir C. Lemon finds it difficult to understand what interest the British consumer or manufacturer in copper has in advocating the repeal of the duties; for he says, the price of copper has been less since the tariff of 1842, than it was before; and he endeavours to involve the different interests advocating the removal of the duties in a contradiction, as to the objects which they propose to attain. The manufacturers say, "that they shall have their copper cheaper; but that is by no means the intention of another class of the petitioners; and there is a third class, who even go so far as to advocate the removal of the duty as a preservative against a reduction in the price of copper. This is not a correct representation of the views of the different classes of the petitioners; their objects, it is not at all difficult to show, are clear, intelligible, and reconcileable with each other.

The British consumer of copper desires the removal of the duties, because he sees that their effect is to deprive him of that advantage which he has hitherto enjoyed over other countries, in having in England the command of the copper markets of the world, and in being exempted from the charges of transit, &c., which foreigners, buying their copper here, have had to pay; and because he sees that his foreign competitors, using copper made in countries where no duty is paid, must have an advantage over him in the price of the raw material. It is but of small moment to the Birmingham manufacturer that he gets his copper at a less price than that which he paid five years ago, if his competitors on the continent and in the United States get it still lower.

By the other class of the petitioners, we presume is meant those interested in the import of copper ores; their interests are clear—the Cuba miner finds that the duty swallows up all his profits, and will probably oblige him to give his trade a new and inconvenient direction; and the South American merchant, and the manufacturer of British fabrics, find that they are losing an important market for their goods, in losing the means by which they were paid for them; trade is but barter, and the Chilian takes his woollens and cloths, from those who take from him his own products in exchange.

And the third class, which includes the British miners, who go so far as to advocate the removal of the duty, as a preservative against a reduction in the price of copper, are equally sound in the view which they take. They see clearly enough, that the price of copper must be regulated by the universal law of supply and demand; they know that England is an exporter of copper, that she is dependent on foreign markets for the sale of a considerable proportion of the produce of her own mines, quite independently of the supply of foreign ores; they are well aware that the effect of the duty is, not to cause the production of foreign copper to cease, but to transfer its production to other countries; and that the effect of dividing up the supply of copper into a number of sources, instead of conducting it, as heretofore, to one fountain head, must be to increase competition, and reduce prices; their interest, it is clear, is to maintain, if possible, England as the emporium of the copper trade of the world.

The interests of the classes engaged in the conversion of the ore into metal, the smelters, the colliers, and the shipowners, who find that their heretofore yearly increasing trade is now yearly diminishing, is so clear as to need not a word of explanation.

We hope that we have succeeded in satisfying your lordship, that our case is one demanding the prompt consideration of the Government, and that none of the statements or arguments of Sir C. Lemon have tended to invalidate it, or to impugn the correctness of the grounds upon which we have founded our claim for the remission of the duties. We press their remission the more urgently upon the consideration of the Government, because we feel strongly, that every year's delay tends more firmly to establish the opposition which has so early taken root in other countries, and which will soon, if unchecked, deprive England of a large and important trade.

Signed, on behalf of the committee,

Liverpool, May 18. CHARLES BROWNELL, Chairman.

THE COPPER DUTIES QUESTION.

TO THE EDITOR OF THE CORNWALL ROYAL GAZETTE.

SIR,—In a former letter, I endeavoured to show the absence of all sufficient reason for, or justification of, the attempts of the merchants and others engaged in the importation and smelting of foreign copper ores, to deprive the Cornish miner of the small protection enjoyed by him under the present tariff. Whether the scale established by the changes of the last five years in our own Customs' duties, or the principle adopted by those countries, whence have proceeded our chief supplies of copper ores, be appealed to, it will be found, with reference to the first, that the maximum duty imposed upon copper ore in this country, however computed, does not exceed 9 per cent.; whilst the latter will show, as already stated by me, that the minimum duty in Chili upon any article imported from hence is 10 per cent.—the mean rate being not less than 20 per cent, and many articles are taxed still higher. In Cuba, the minimum rate of duty upon any of our production, is 24 per cent. If these facts be worth anything, then ought the clamourers for free trade in copper ores to be for ever silent. On referring to the table of duties attached to the bill brought before the House of Commons in March, last year, which effected the last sweeping reduction of duties, it will be found that there are enumerated 148 articles; of which 63 are made subject to a fixed duty of 10 per cent., or half that rate when imported from British possessions; six of them pay 15 per cent., and one pays 25 per cent. Of the remaining 78 articles, charged by weight or tale, except such as come under the head of provisions, few are rated below what would constitute 10 per cent. of their general value, and many of them much higher. It deserves also to be ever kept in mind that, of the staple manufactures of this country, three of the largest—cotton, linen, and wool—are all guarded here, by import duties of 10 per cent., upon corresponding articles of foreign production; and silk by duties of 15 to 25 per cent. *ad valorem*—a fact which should silence those vehement advocates for free trade, the Chamber of Commerce in Manchester; whose selfish, exaggerated, and, in some instances, absolutely false assertions, distinguish their memorial among all the curious productions contained in the Parliamentary return in question.

But we are menaced with divers fearful consequences, as a punishment for the protection of one of our staple commodities; of which threats I will now consider four; first, the determination of the Chilians to renew the smelting of their own ores; secondly, an extensive export of ores to France and the United States for the like purpose; thirdly, as a consequence of the preceding, the diminution in the trade in their ores to this country; and, fourthly, the angry feeling of the Chilian Government, at the maintenance of our duties. Some of these representations are either so ridiculous in themselves, or so opposed to reason and truth, that it is almost an act of supererogation to notice them at all; but, the constant reiteration of the same stories from different quarters of the country, would, if suffered to pass uncontradicted, confer upon them some degree of value, where the real facts of the case are not sufficiently known.

Let us look at the first menace—"the determination of the Chilians to *renew* the smelting of their ores." The assertion that the Chilians have ever discontinued the smelting of their copper ores, implied in the use of the term *renewal*, is wholly destitute of truth. That it has been, of late years, carried on to a less extent than formerly, is perhaps the case; but the efforts to extend the amount smelted in the country will depend for their successful issue, upon more than the mere will—upon something in fact, which, it is well known, does not exist—viz.: a sufficient supply of wood for the purpose. To the scarcity of fuel proper for that purpose, and not to any want of inclination on the part of the native mine owners, or their *habilitadores*, to smelt even the whole of their ores, if it were practicable, on beneficial terms, must be attributed the fact of a diminished production of the pure metal in Chili. Much is said of the intention to import largely of coals, in order to make good the deficiency of wood, and promote the extension of smelting in Chili. The authority of some of the numerous letters inserted in the House of Commons return, to bolster up the case of the memorialists, is quite sufficient to meet that part of the question—those letters fix 2*l.* per ton as the cost in Chili of coal fit for purposes of smelting. I will concede, for the sake of argument, a reduction of 25 per cent. from that price, and call the cost in Chili 30*s.* per ton. And although an occasional cargo, sent on speculation, might be purchased at a lower rate, no steady supply could be relied on at a less cost; and I would then ask, if there is the remotest chance of a better result to the Chilian miner, from smelting at home, than continuing to send his ore here? It must also be borne in mind, that such a price for coals is at the port of discharge, where the smelting must necessarily be carried on; and the cost of bringing the ores down to the coast, which is among the items paraded in the statements of the memorialists as a protection to Cornish miners, will be the same, whether brought there for smelting or shipment. These considerations will, I think, dispose of all apprehensions as to any injurious effects upon our interests from smelting in Chili.

The second and third points—"the extensive export of ores to France and the United States for the like purpose"—and "as a consequence, the diminution in the trade in their ores to this country"—may be taken together, and I will first dispose of the question of diminution in exports from Chili to this country. Sir C. Lemon has shown, by reference to the official accounts of the Chilian Government, what the trade of the four years 1836 to 1839 was, in copper and copper ores. Reduced to English weights, the exports averaged, in those four years, 2800 tons of bar copper, and 10,140 tons of ore; which, at 25 per cent., would yield 2535 tons of metal; or, at 30 per cent., would produce 3042 tons of metal. These exports equivalent to 5335 tons, or 5842 tons of copper, according to which of the above per centages may be adopted, it must be remembered, were to the whole world. In the four years which have succeeded the imposition of the present duty—viz.: from 1843 to 1846, the imports of ores from Chili into this country alone, have averaged a produce of above 5000 tons of metal per annum; and, but for the falling off in the year 1845, resulting in a great measure from natural causes, the imports into England alone, for the last four years, would have approached nearly to the whole average exports of Chili to all parts of the world, in the years 1836 to 1839. In the year 1845, when the reduced import took place, prices maintained their full rate in Chili; quotations for that year, now before me, giving the same value for copper and copper ore in that country in 1845, which prevailed in 1836 to 1839; sufficiently proving that the diminished supplies from thence, in 1845, resulted from deficient production, or the absence of transmission to the ports of shipment: what I have stated above applies to Chili only. Now, let us see what is the position of affairs as to general imports of copper ore from Chili, Cuba, other foreign countries, and our own colonial settlements; and this, of course, can only be effectively stated, by giving, as Sir C. Lemon has done, the quantity of metal obtained. Thus, it appears that, whilst the average import of the four years 1838 to 1841 was equal to 7238 tons of metal, and that of the year 1842 to 9705 tons, the average of the four years 1843 to 1846 was the equivalent of 11,738 tons of copper; *the smallest of those four years* being 1846, when the quantity upon which duty was paid was 10,878 tons, being 12 per cent. more than 1842, and 50 per cent. more than the average of the years 1838 to 1841; whilst, as stated by Sir C. Lemon, the *average of the last four years* is 62 per cent. above that of 1838 to 1841. The duty received in the year 1845, was 59,069*l.*; and in 1846, 54,283*l.*; sums too trivial, in the estimation of the Manchester Chamber of Commerce, and some others of the memorialists, to be worth retaining an argument most fatal to the general character of their own representations, which magnify those duties into an insuperable bar to the prosperity of our general trade with the countries from which copper ores are imported, and further demonstrate the accuracy of that computation, which places the duty below 10 per cent. upon the value of the ores so imported.

With regard to the rivalship of France and the United States in smelting, I can perfectly comprehend to what extremes the memorialists and their correspondents were driven for argument, when that consideration was introduced. From the localities of the coal-fields of France, so ably and accurately laid down by Sir C. Lemon, a choice of evils is presented; whether a costly transmission of the ore from the ports of France and the localities of the coal mines, there to encounter a defective quality of coal for the purpose of smelting; or, the bringing of that defective quality of coal to the port of discharge of the ores; or, as the alternative of these, the working of the smelters by the agency of English coal. The latter, the surest way of making good metal, is subject only to one little drawback—viz.: that the price of north country, or other good English coal, at the southern ports of France, in the Bay of Biscay, and in those of the Mediterranean, is now not less than 27*s.* to 29*s.* per ton, duty paid. I am not speaking off book here, having in my possession a copy of a contract for a large quantity deliverable at one of those ports, which will cost, when landed, 28*s.* 3*d.* per English ton, equal to 1015 kilogrammes; and the French contractor, at that price, congratulates himself on the good bargain which he has made. With regard to the value of coal in America, and smelting there, my information, at the moment, is less exact; but its successful accomplishment there, has been so satisfactorily shown to be impracticable, in Sir C. Lemon's letter, that another word in support of the conclusion at which he has arrived, seems to me to be unnecessary.

To come to the fourth point which I have selected for comment—"the angry feeling of the Chilian Government at the maintenance of our duties." It would really seem to be a waste of time, in meeting that position, to do more than once again to refer to the Chilian tariff; and, incidentally, to dispose of the same feeling, if it exist with the authorities in Cuba, by the same short course. When the minimum rate of charge in Chili, upon our supplies, is 10 per cent., the mean rate 20 per cent., and the maximum 35 per cent.; and when, in the very articles of copper rivets and nails (this moment passing under my observation in the tariff), I see a duty of 15 per cent. charged upon copper rivets, at a valuation of 132*s.* per cwt.; and the same duty upon copper nails, at a valuation of 224*s.* per cwt.; I may surely ask, upon what justifiable ground the Chilian Government can take offence at a duty upon an article entering into direct competition with a valuable staple of our own country, the maximum on which duty is 9 per cent. upon its value here; or, as already shown in my former letter, by a different, and, as I contend, a fair mode of estimate, subject only to a charge of 7 per cent. Then, with regard to Cuba, I repeat that importations into that island, in British bottoms, are subject to duties of 24 to 30 per cent. upon an arbitrary valuation; and the actual duties payable upon three articles of metal, by the tariff, now open before me, are—

Upon Bar Iron	£4	18	4 per ton
On Iron Nails	6	11	8 "
And on Sheet Copper	38	10	0 "

No wonder with such duties upon our articles of supply, that the Government of Cuba should be themselves silent; and devolve upon the British capitalists embarked in the trade, and others connected with them, the ungracious task of complaining of the comparatively small protection afforded to their brother miners at home. It is somewhat beside the object of this letter to refer to the tonnage dues, and port and other charges payable by British shipping in the ports of Cuba. To those curious in such matters, it would be an appalling inquiry, and I will merely remark *en passant*, that the port charges, and dues alone, upon a vessel of 160 tons, by an account given in detail, are 264*l.* or 128*l.* sterling, incurred in 14 days!

Since the foregoing was written, I have perused a pamphlet entitled "A Letter to the Right Hon. the Earl of Clarendon, President of the Board of Trade, on the Copper Ore Duties, in reply to the Letter of Sir C. Lemon, Bart." This production, which is dated Liverpool, is signed "on behalf of the Committee, Charles Brownell, chairman;" and, as it adopts, and attempts the justification of, the several memorials and other documents contained in the Parliamentary return presented at the instigation of the general body of merchants and others engaged, or in some way interested, in the importation and smelting of foreign ores, it may be clearly regarded as the manifesto of that body. My first impression, on reading this letter of the committee of the *Anti-British-Mining League*, was, to throw aside what I had here written; and, at once, to direct my attention to the matter of that production; but, on reconsideration, I ask you to give my present communication a place in your columns, as it stands.

To designate the letter of the Liverpool committee as a precious specimen of cunningly-devised special pleading, mystification of facts, and clumsy defence of many of the previous productions of the same parties, is to apply to it the mildest terms that will describe its general character; and it clearly comes within the description which has often been given of the acts and words of congregated bodies, that they, as such, will do and say things from which, in their individual names and capacities, they would severally recoil. In speaking thus plainly of the document now issued by that body, I feel it due to apply to the case the qualification contained in the last sentence; since it is perfectly within my knowledge, that more honourable men than many of those whose names appear to the documents in the Parliamentary return in question, do not exist; but that consideration shall not deter me from exposing the discrepancies, misrepresentations, and disingenuous statements, now put forth by the committee, with a plainness, which I trust will tear away the thin and flimsy covering, however glossed over in plausible language, with which they have again attempted to conceal the weakness of their case; and, with your permission, an early number of your publication shall fully expose that weakness to the public eye: however, in the analysis of their case, I may have occasion again to advert to some of the facts and figures already noticed in this, and my former letter, upon the subject. If I attempt any apology for the length of this letter, or the probable equal extent of my next, I will content myself by making a simple reference to the vast importance of the subject, as affecting the most vital interests of the county of Cornwall.

London, June 5, 1847. Yours, &c., PUBLIUS.

MINING IN AUSTRALIA.

We have been kindly favoured by Mr. Wm. Owen, with an opportunity of inspecting the mineral specimens brought by him from Western Australia; and although there is nothing very striking amongst them, they are quite enough to encourage further researches by competent persons. We noticed a small but brilliant specimen of galena, imbedded in granular rock of quartz and spar, and similar to some we have seen in South Australian cross-courses. Judging from that system of analogy, which is better understood than explained by practical mineralogists, the inference is, that Western Australia contains the ores of copper and zinc, as well as of lead; and that iron ores and ironstone may be found in abundance. The samples of coal were very satisfactory.—*Adelaide Observer, January* 16.

Within the last few days, a discovery has been made upon a section on the banks of the Torrens, belonging to Messrs. Smith and Levi, which promises to open a new source of wealth to the colonists. The miners engaged in exploring a vein of copper, accidentally struck upon a lode of galena, constituting probably a spur from the main lode of that material. This ore has been found, by Dr. Davy's assay, to contain the enormous proportion of more than 600 ozs. of silver to the ton. The galena is accompanied with other varieties of lead and silver ore, and in appearance differs but little from specimens already common in the colony, except in the peculiar matrix in which it is enclosed. The following are the particulars of the analysis, as furnished by Dr. Davy:—"*Examination of a specimen of lead and silver ore, for Messrs. Smith and Levi.*—The metalliferous portion of the specimen, separated nearly, but not completely, from its matrix, weighed 75 grains, and yielded 45 grains of lead, containing 1·3% of pure silver, or about 1¼ per cent. on the ore. This is at the rate of 627 ozs. (avoirdupois) to the ton of 20 cwts. The matrix contains no other substance of value, but deserves particular notice, as being unusual, and probably indicating the same rich description of ore in other places." We believe we are safe in affirming, that the mineral discovered is the *richest* argentiferous lead ore in the known world. We trust it will prove as abundant as it appears to be productive. To some it may be interesting to know the proportion of silver which the most celebrated ores of galena yield to the ton, and thence draw a comparison with the mineral discovered. That of the north of England contains from 22 to 24 ozs. of silver to the ton, the average quantity being 11½. That of Huel Pool, in Cornwall, yields 60 ozs.; the Guarnock Mine, near Truro, 70; and a mine near Beeralston, in Devonshire, as much as 135. The ore discovered on Messrs. Smith and Levi's land yielding 609 ozs. to the ton, the difference in its favour over the most productive English ores is actually upwards of 344 per cent. The richest galena hitherto discovered has yielded no more than 12 to 18 ozs. of silver to the quintal (100 lbs.), whereas that just found produces, as we have been informed, more than 27 ozs.—*South Australian, January* 19.

MINERAL WEALTH OF RUSSIA.—Nature has endowed Russia profusely with the various species from all the kingdoms of Nature, and not less so with metals and minerals. Nearly all the metals are found there, and, what is still more, of superior quality. Mining is, therefore, so rapidly progressing in Russia, and more especially ever since 1815, when the Duke of Leuchtenberg, supreme head of the mining works in Russia, has, by his scientific knowledge, profitably explored the mining districts. The principal mines are in the Ural Mountains, and the little Altai, in Siberia. Ever since 1815, very rich gold sand has been found on the Ural, upon an area of about 3000 English square miles. Alexander Humboldt calculates that Russia gains annually, upon an average, from her mines, 22,000 marks of gold (616,000*l.*), and 76,000 marks of silver (152,000*l.*); while the whole of Europe, together with Asiastic Russia, furnish annually 26,000 marks of gold (728,000*l.*), and 292,000 marks of silver (584,000*l.*) In recent times, Russia's gain in gold (to which is added ever since 1830 a considerable amount of platina), has progressed to an enormous rate. In 1844, the total weight of gold gained in the Ural and Altai Mines, already amounted to 1341 pud and 23 lbs. (53,633 lbs.), while that of platina had risen to 99 pud (3960 lbs.) The gold mining works of the Ural had furnished, in the same year, 1242 1-3d lbs., while the gold of Eastern Siberia, amounted to 20,620 2-3d lbs. The richest mines are now, however, in the district of Tagilsk, belonging to the family of Prince Demidoff. From 1824, till the end of 1833, platina was coined to the amount of 8,186,620 silver rubles (1,364,437*l.*) Platina having, however, been found more useful for chemical ends, a stop was entirely made to the coinage of that metal by an ukase of 1846. In copper, Russia gained already, in 1830, about 9,232,000 lbs., in iron nearly 480,000,000 lbs., but has considerably increased of late. The lead found there is not of a superior quality, and the quantity hardly covers the consumption of the country. Granite, porphyry, malachite, and other species of stone are found in vast quantities, and superior in size and beauty. Finland is peculiarly rich in granite, and the lofty Alexander statue before the winter palace at St. Petersburgh, the pillars of the Kazan church, as also of the newly-built Isaac's church in that place, are erected of that stone. In 1829, the first diamond was discovered in the gold sands of Countess Polier—neither is their any lack in the half-precious stones. Universally known is the Russian isinglass, which is found upon an islet in the White Sea, in tables of the size of a square foot. Percelain and argillaceous earth are furnished by Siberia and Tauria. Extremely rich is the country in salt, and more especially in the boundary provinces towards Asia, and the produce may be calculated to amount to about 1,600,000,000 lbs.

NOVEL MINE INSPECTOR.—An action was brought at the Penzance County Court, by Henry Thomas, a wheelwright, to recover from Mr. W. J. Nicholls, the proprietor of a small mine in the neighbourhood, called Wheal Speed, the sum of 2*l.* 19*s.* 9*d.*, for work and labour done. The plaintiff said he had been employed by the defendant, and put in the following bill:—

To inspecting the mine for a new lift	£1	0	0	
Making a model for ditto	1	4	0	
Taking out timber for ditto	0	3	6	
Taking out timber for a bellows	0	3	6	
2½ days inspecting the mine	0	8	9	= £2 19 9

The defendant said, he had not employed him to go down into the mine, nor to make a model; a lift was required, which he had made, but it could not be used, and for which he had already been paid. Mr. Roscorla (for Mr. Nicholls) said the whole affair was an imposition; and ridiculed the idea of a wheelwright being employed to inspect a mine—which was only 8 or 10 fathoms deep. The plaintiff had before brought an action against the defendant, for a claim of 11*l.* (1*l.* 4*s.* being for the lift itself), and on its being left to referees, they awarded him 2*l.* 15*s.*, and then considered he was amply remunerated. A mine carpenter was called, who proved that a model for a lift was an unheard-of thing, and that taking out timber for work was never paid for.—Verdict for defendant.

GUN-COTTON—IMPORTANT EXPERIMENTS IN SOUTH WALES.—Last week we noticed some very satisfactory experiments in this neighbourhood made with Professor Schönbein's gun-cotton, by Messrs. Wheeler and Ringer, for the patentees, Messrs. Hall and Son. We are indebted to the same gentlemen for the following account of the continuation of their labours, which we are sure will interest our readers in this important mining district. On Friday afternoon last, two shots of 6 ozs. and 8 ozs., respectively, were fired in the Cyfarthfa Quarries, in the presence of R. Crawshay, Esq., the proprietor, and several gentlemen well acquainted with, and connected in, the iron and coal trades, as well as of a large number of workmen. Both shots were very satisfactory; the work done by the gun-cotton, in moving the rock from its bed, and opening up its seams, was admitted on all hands to be very great, and quite equal to what six times its weight of gunpowder would have been; still it is proper to observe that in blasting with powder it is usual to make a double charge; the first lifts the rock and opens it into fissures, which are afterwards filled up with a much larger quantity of powder than is used for the first charge, and a second blast is made; this scatters and breaks up the stone into pieces suitable for use; so that with a charge, say, of 3 lbs. of gunpowder for the first shot, from 10 to 12 lbs. will be used for the second. These two operations, it is confidently believed, might be reduced into one by means of a cartridge containing a larger quantity of cotton, say, from 2 lbs. to 3 lbs.; but of which sizes the gentlemen, unfortunately, had none with them, but which, at a future opportunity, will certainly be tried. On Monday last, 7th inst., the experiments were at the new works of C. Bailey, Esq., at Aberaman, and equally satisfactory with all the others. Two shots were fired at the bottom of a large pit in two sump holes respectively, without producing the least smoke, and did great work. Another, a small one, with cotton weighing less than an ounce, was exploded in the black-band formation in the same pit, which did most satisfactory execution; and a fourth shot was fired in the quarry, which is composed of the hard Pennant stone. Here, at the base of an immense mass of rock, closely imbedded on every side, a hole of 8 ft. in depth was bored perpendicularly, and a charge of 8 ozs. of cotton introduced. The workmen were overheard making wagers of beer with each other that it would be impossible to move it. All was expectation—the fusee was fired—away scampered the men—in a few seconds a report was heard—dust flew in the air, no smoke was seen save that of the fusee—and the rock showed itself broken into numerous fragments, to the surprise of every one present, and of none more so than that of the highly-respected owner of the works. Mr. D. Williams, of Ynisycnon, declared it surpassed everything he had ever seen, or could have believed to be possible. This was the concluding experiment in South Wales for the present; and we are happy to learn that most of the ironmasters, with that liberality which belongs to their character, are determined to give the article a fair trial in their works, and have given orders for it accordingly; and we look forward to the general adoption of gun-cotton in iron and coal-works (particularly in underground work), as one of the greatest boons to the workman in the preservation of his health that could possibly be granted to him.—*Merthyr Guardian.*

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We have no change in flat-rod shaft, sinking under the 90 fm. level. The lode in the 18 fm. level end west is worth about 18*l.* per fm.; the back of this level, for 35 fms. behind the end opening on tribute, looks well, and worth from 18*l.* to 20*l.* per fm. In the 12 fm. level end the lode has rather improved, and worth about 14*l.* per fm.; the back of the 12 fm. level is at present producing less ore; the stopes in the bottom of the 12 fm. level continue to look well, and worth about 16*l.* per fm. The winze sinking under the 18 fm. level, on this lode, is still poor. We have this week sunk through a small flat branch, about 2 in. wide, composed principally of white iron, with spots of lead; we consider this a good indication. There is nothing further to report upon since my last. We expect to ship a cargo of lead ore about the 15th inst.—T. Argove; G. White: June 11.

REDFORD UNITED.—At Wheal Marquis, the lode in the sump winze (now 5 fms. 3 ft. under the 80 fm. level) is 3 ft. wide, and worth 30*l.* per fm. In the 80 fm. level east the lode is 3½ ft. wide—saving work. The lode in the 70 fm. level east is 2 ft. wide, composed of spar, mundic, and ore. The lode in the 58 fm. level is 18 in. wide, producing stones of ore occasionally. At Liscombe, the lode is without alteration in the adit level and rise in this level. The lode in the south engine-shaft is 3 ft. wide, producing some saving work—altogether more promising than for some time past; there is no alteration in the adit level east.—J. Phillips: June 15.

CALLINGTON.—We are 21 fms. deep at Kelly Bray, and have a dry shaft; the ground continues of the most congenial character, mixed with branches and facings of mundic, chlorite, quartz, and copper ores; sinking on the course of the lode, we still find the lode large, regular, and of the same promising character, with stones of copper ores. In the 100 fm. level, driving south, from the north engine-shaft, the lode continues to produce rich work, the back will pay for working at 4*a.* in the 1*l.* on the lead; in the north end we have a promising lode 1 ft. wide, the back will work at a moderate tribute. In the 90 south, no lode has been taken down. The 70 east is in very disordered ground, occasioned by several small cross-courses obliquely crossing the same. Driving south, to the east of the cross-course, in the 40, the ground is favourable. At the south mine, in the 125 south the lode is 1 ft. wide, good work; in the north end the lode has not been taken down. In the 112 south the lode is 18 in. wide, spotted with silver-lead ores; the winze below this level is sinking on a cross-course, the ground being more soft than on the lead course. In the 100 south no lode has been taken down; in the north end we are opening ground that will set at 10*s.* or 12*s.* in the 1*l.* The winze, just behind the 90 south, is sinking on a cross-course; in the north end, we have the north part of the channel of elvans—it is of a favourable character, and the back will set at a moderate tribute.—J. T. Phillips: June 14.

COATLITHE HILLS.—In the beginning of last week we began driving eastward from A shaft, and have driven nearly a fathom. The vein is improved since my last, being now above 1 ft. wide, more regular, and rather more ore in it. We have stoped about 10 fms. in the horse level this week, and I expect to get into the end by the end of next week, and then I shall commence driving.—J. M. Paull.—[To the report in last week's Journal, we, by error, appended the signature of "W. W. Paull," which we now correct, lest it should be mistaken for that of the respected superintendent of the mineral property of the Greenwich Hospital. This explanation is necessary, in consequence of complaint having been made by the party referred to, fearing he shall be reprimanded by the Hospital officials—his situation precluding reporting on other mines, being held as their sole agent.]

CUBERT SILVER-LEAD.—The ground in the engine-shaft is a little more favourable for sinking than it has been for some time past. In the 35 fm. level, going west, the lode is 2 ft. wide, composed of soft spar, mundic, and lead, (say) worth for the latter about one third of a ton per fm.; in this level, driving east, the lode is 18 in. wide, worth about half or two-thirds of a ton of lead per fathom. In going east, in the 25 fm. level, the lode is 2 ft. wide, worth about two-thirds of a ton of lead per fathom; going west, in this level, the lode is about 10 in. wide—soft spar, mundic, and a little ore. The 15 fm. level east is disordered at this time by an east and west lode coming in contact; appearances, however, are very promising. The tribute department, on the whole, since last setting day, we consider improved. We sampled to-day, computed 60 tons 21 cwts. of silver-lead ore, to be sold at the offices, 8, George-yard, Lombard-street, London, on Saturday next, the 19th inst., at 11 a.m.—R. Rowe.

DEAN PRIOR AND BUCKFASTLEIGH.—In the 30 fm. level there is no alteration since last reported; the 40 end men have commenced cross-cutting north, to ascertain the size and nature of the lode; the bottom end men are at present engaged repairing the 50 fm. level, near the machine whim-shaft—the old timber being decayed, we find it necessary to put in new, in order to keep the levels open. The lode in the two pitches, that I referred to in my last report, is looking favourable on Saturday last. I have sett a pitch in the bottom of the 40 fm. level, east of the winze, near the end; the number of pitches set in this mine is three, varying from 10*s.* to 12*s.* in the 1*l.*—H. Choake: June 15.

DEVON AND COURTENAY CONSOLS.—I beg to inform you, that since my last report of the 8th June, we have driven 15 ft. at the 30 fm. level—viz.: 9 ft. west on the south lode, and 6 ft. east; there are four men in each end, driving for 4*l.* 10*s.* per fm.; the lode in the western end is poor, composed of spar, killas, and mundic, and is about 2 ft. 6 in. wide; the lode in the eastern end is 3 ft. 6 in. wide, composed of spar, peach, mundic, and copper ore. The men in the engine-shaft are putting in a penthouse at the 30 fm. level, for the purpose of sinking, for which they get 12*l.* 10*s.* per fm. during the month. The deep adit, on south lode, is about 3 ft. wide, composed of spar, killas, mundic, and copper ore. The shallow adit, on north lode, is about 20 in. wide, composed of spar, flookan, and lead ore.—E. Northey: June 15.

EAST ALVINNEY.—*June* 9.—We have cleared up the old men's workings on the north lode, and I am happy to tell you, that we have broken most excellent stones of tin. The lode and branches are about 2 ft. wide, all of which will make good stamps work. We have set to sink 6 ft. on the course of the lode, after which we intend to stope east and west. We intend also to set a pitch on tribute in the eastern end of the stopes. We need to begin to erect our stamps immediately, as there is no doubt but we shall be constantly breaking tin. We have also commenced clearing on the middle lode.——*June* 14.—I was at this mine on Saturday, and set a pitch on tribute for 10*s.* in the 1*l.* I have only set for one month, as we daily expect an improvement; but if the branch only continues as at present, we shall set for a much lower tribute next month. The reason why I give 10*s.* in the 1*l.* is, the tributers have got nearly a week's work to take down a stope of high ground before commencing breaking tin, which they are to do in their bargains. In preparing to sink our shaft farther west, we have discovered a most splendid branch of tin, which will intersect the lode shortly. It is now about 3 ft. from the lode, and when we commence stoping at this place, will be taken away with the lode. The main lode, or branch, is about 14 in. wide, composed, one part, of very large spots of tin, some diamonds, nearly an inch solid tin, and others smaller; the next, large flakes of bright mica, spangled with tin, and the other part is white mundic. I call it a very kindly lode indeed; we are saving all the lode, as it is good stamps work, and the tin in it very rich.—John Spargo.

EAST CROWNDALE.—We have fixed our standing lift, and every other preparation for sinking, which we shall commence to do immediately. The ground in the adit level, towards Rix-hill lode, continues on in just the same sort of ground it has for several weeks past; the end is driven towards the lode 37 fms. 2 ft.; we have now to drive about 8 fms.—the lode underlies south. We calculated at first the underlay to be north, and have, of course, several fathoms more to drive than we at first stated it to be. The shaft on the north lode, at Rix-hill, is now down from surface 9 fms. 5 ft. There is no material alteration in the appearance of the lode since last report.—S. Paul: June 12.

EAST TAMAR CONSOLS.—At Whitson, Hitchins's engine-shaft is sunk 10 ft. below the 64 fm. level; the men in the shaft have met with an accident by splitting the windbore, which will cause a delay of two or three days. The lode in the 64 fm. level, north and south, is 14 in. wide, fluor-spar and ore, work of a coarse quality. The lode in the 60 fm. level north is 15 in. wide, saving work; the lode in the 60 fm. level south is 14 in. wide, producing some good stones of silver-lead ores. The 54 fm. level north is still in slidy ground; I expect we are near the lode, as the water is increasing, and strings of lead in the flookan. The 46 fm. level, south from Gourd's, is 20 in. wide, saving work. At Furse-hill, Harrison's engine-shaft is sunk 5 fms. 2 ft. below the 46 fm. level, lode 2 ft. wide, composed of fluor-spar and silver-lead ore—a very kindly lode. The lode in the 46 fm. level south is 2 ft. wide, good saving work; the lode in the 46 fm. level north is 20 in. wide, good saving work. The lode in the 38 fm. level north is 14 in. wide, saving work; the lode in the 38 south is 15 in. wide, work of a good quality. At Charlotte's, the lode in the 11 fm. level is 2 ft. wide, a very promising lode; we have cleared south at this level 30 fms.; the ground in the back of this level will set on tribute. We sampled on Wednesday last 80 tons of silver-lead ores.—B. Robins; June 15.

GREAT MICHELL CONSOLS.—The engine-shaft is down below the 22 fm. level 18 fms., and will be sunk sufficiently deep by the end of this week for a 35 fm. level, when we shall commence driving both east and west, without a moment's delay; the lode here is producing spar, mundic, fluor, and stones of ore. In the winze sinking below the 22 fm. level, west of the engine-shaft, the lode has a very promising appearance, producing good stones of grey and yellow ore.—T. Richards: June 15.

GWINEAR CONSOLS.—In driving west on Haywood's lode it has a promising appearance, green with spots of ore—but not enough to save; being of that light quality we cannot dress it; there is spots of ore in the eastern end also, but not worth saving. We prepared for sampling a fortnight since, but the sample takers have not been here to take samples, nor do I think they will now, until next western sampling.—Hugh Stephens: June 12.

GUNNIS LAKE.—At Chilsworthy, the lode in Bailey's engine-shaft is 3 ft. wide, gossan, iron, and good stones of ore. We are still driving north, in the 12 fm. level west.—W. Richards: June 15.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, continues 3 ft. wide—producing good stones of copper ore.—P. Richards: June 15.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level, west of north shaft, is 5½ ft. wide, good work—a very kindly lode; and in this level east the lode is 3 feet wide, spar, peach, and tin—very good work. The engineers are now actively engaged erecting the engine, stamps, &c.—W. Richards.

HOLMBUSH.—The ground in the diagonal shaft, below the 120 fm. level, is still favourable for sinking, more so than it was last week (if any difference); the branches still continue to pass through it, and to retain their size and quality; each branch contains kindly spar, mundic, and spots and stones of copper ore of good quality; the lode in the 120 fm. level, west of the great cross-course is 15 in. wide, composed of spar, mundic, and stones of ore. The lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is hove by a cross-course; at present we are cutting m south to find the caunter part of the lode; which level, east of Hitchins's shaft, on the south part, is still suspended—the whole of the rubbish found in the winze (as reported on last week) not being cleared. The lode in the 100 fm. level south, is 20 in. wide, composed of flookan and spar, spotted throughout with lead, the whole of which is saved and stamped; we have about 10 fms. further to extend this level to get under the shoot of ore we had in the 100 fm. level. The lode, in the rise above the 100 fm. level, is 2 ft. wide, composed of spar, prian, and lead, worth 10*l.* per fm.; during the past week we have been stripping down the side of the 100 fm. level, where the water is issuing from, but to the present time we have discovered nothing of a lode or branch of a lode, we shall continue our researches until we are perfectly satisfied there is no lode there. The lode in the 90 fm. level south, is 2 ft. wide, composed of spar and flookan, bespangled with lead—so much so, we stamp the whole of it.—W. Lean.

KIRKCUDBRIGHTSHIRE.—By Capt. Buzzo's request (who is gone to England on business for the mine), I beg to hand you a report of our present prospects:—The lode in the end west, in the 40 fm. level, is 3 ft. wide, producing 1½ ton of lead per fm. The lode in the 30 fm. level west is 5 ft. wide, producing 1 ton per fm.; the stopes in the back of this level are looking well. In driving east, on the caunter, the lode is 4 ft. wide, producing half a ton per fm. The lode in the 20 fm. level west is producing 1½ ton per fm., and has every appearance of an increase of lead.—J. Curnow: June 12.——It gives me great pleasure in stating to you, that the end west in the 20 fm. level has greatly improved since report of 12th inst., worth from 25*l.* to 30*l.* per fm. The end west, in the 30 fm. level, is also improved for lead. Other places of operations are much the same as last reported.—John Curnow: June 16.

LANIVET CONSOLS.—We have not cut through the lode in the 80 fm. level, west of Elizabeth shaft; its general appearance is much as last reported. In the winze sinking under the 30 fm. level, west of Elizabeth shaft, on the north part of the lode, the leader part is 2 ft. wide—saving work. In driving east, on the south part of the lode, the leader part is 1 ft. wide, producing good stones of ore. We have for our sampling, on Monday next, 98 tons of copper ore.—H. Williams: June 12.

LEWIS.—I feel somewhat disappointed this evening in not being able to tell you that the new axle is gone to work, but having some small repairs more than we expected, has prevented its working; but, on Tuesday, or Wednesday next, at the furthest, it will certainly be in good course of work. I am very desirous to see it in full operation, as our prospects underground are threatening to overpower our stamps; and this I think is not a bad indication. The lode in the 50 east is still improving—it has been better this week than I have seen it for some time past; the 50 east, on south branch, is very promising. The 40 is looking very well—opening ground that will work at about 1*s.* 3*d.* tribute, what I call good ground. The lode in the 60 east does not improve so much as I should like to see it; but really I do think we shall find it more productive after we extend east about 10 or 12 ft., and get into more settled ground. I think our tribute pitches are most of them very promising, and inducing the men to work with good spirit; we have lengthened the flues of our burning house, which is now doing very much better—burning the tin well.

NORTH WHEAL FRIENDSHIP.—The lode is looking well; we are breaking most excellent stones of tin, from 80 to 40 lbs. weight—most splendid work indeed.—John Spargo.

SILVER VALLEY.—At the engine-shaft, in the 50 fm. level cross-cut, we have cut into the tin lode about 2 ft. 9 in., but it is not yet cut through; this part, as far as it is seen, has a very kindly appearance, composed of peach, capel, spar, jack, and mundic. The silver lode, in the 30 fm. level west, is now about 20 in. wide, chiefly flookan and carbonate of iron, intermixed with mundic; there are small branches inclining towards the lode from the north side of the level, which are, no doubt, parts of the branch that we left in the side about 2 fms. behind the present end—altogether, it looks very favourable. In the 20 fm. level, driving west, the lode is 2 ft. wide; it has just the same appearance as reported last, containing spots of silver-lead ores. At Wheal Brothers deep adit we expect to complete the level to the present western end in about a week from this time.—J. Richards: June 14.

SOUTH FRIENDSHIP WHEAL ANNE.—*June* 9.—We have fixed and completed our feed-off bob, and connected rod thereto, we have also dropped the lift from the 18 to the 28 fm. level. The two men that took the pitch in the back of the 10 fm. level broke about 50*l.* worth of ore of good quality. We have now set the pitch at a lower tribute, and, if it continues as at present, the men will get fair wages. I hope to set another pitch next week in the back of the same level, east of the mill-house shaft.——*June* 14.—I was at this mine on Friday, and set another pitch on tribute, as I told you last week, in the back of the 10 fm. level, and the men are breaking good stones of ore. I hope to see the back of the 28 fm. level to-morrow.—John Spargo.

SOUTH TAMAR.—Our engine works well, and has forked the water 12 fms. under the 24 fm. level. The men in the adit level are clearing and securing the same very satisfactorily.—R. Robins: June 15.

SOUTH WHEAL TRELAWNEY.—The ground in the engine-shaft, below the adit level, is favourable for sinking, and presents very promising appearances indeed—the shaft being mineralised throughout with crystals of copper, lead, and mundic, with prian heads intersecting the same; the men are working with all possible dispatch, and we hope this month to sink 3 fms. The ground in the cross-cut, west from the shaft, is likewise favourable for driving, being full of prian heads, mundic, and spots of lead. Soby's lode, in the adit level south, has not been driven on since setting-day, the men choosing to communicate the adit to the shaft by driving from that direction, being nearer the shaft to wheel the stuff; after the communication is made, the adit level will be suspended. The engineers will complete the engine in a fortnight from the present time, provided we wanted it to work—but we shall not, for several weeks after; the water (just now) being very little below the adit level. The masons are likewise getting on fast with their work—the walls of the boiler-house is complete, and the stack built to within 10 feet of the height it is intended to rear it.—W. Lean: June 12.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, the lode is about 2 ft. wide, much as last week, producing stones of ore; the rise, above the 100 east, is holed with a borer—5 ft. of ground more to communicate. The winze, below the 90 east, is holed to the above; Garden's shaft, below the 90, is hard, still in elvans; in the 90, west of Garden's, the lode is 2 ft. wide, producing stones of ore, not to value. In the 80, west of ditto, the lode is 3 ft. wide, worth 14*l.* per fm., and looking very promising; in the 80, east of ditto, the lode is 1 ft. wide, worth 25*l.* per fm.—this end has been rather poor through the week, now improved. In the winze, below the 70, east of ditto, the lode is 18 in. wide, worth 4*l.* per fm.; in the 70, west of Symonds's, the lode is 4 ft. wide, capels in general, no ore to value. In the 60, west of ditto, the lode is 20 in. wide, worth 5*l.* per fm. The winze, below the 50 west, holed this morning—the ground east and west of it will be set on tribute; In the adit east on Wheal Parent lode, the lode is 20 in. wide, producing stones of ore.—W. Symons: June 12.

UNITED HILLS.—In the 90 fm. level, east of Williams's shaft, the lode is 2 ft. wide, worth 6*l.* per fm.; in the 90, west of ditto, the lode is 3½ ft. wide, worth 14*l.* per fm.; in the stopes, in the back of the 90 west, the lode is 3 ft. wide, worth 18*l.* per fm. In the 80, west of cross-cut (worth 6*s.* 8*d.* tribute for the end and back), the lode is 2 ft. wide, worth 12*l.* per fm.; in the 80, east of Williams's shaft, the lode is 3 ft. wide, worth 12*l.* per fm. In the 70, east of eastern shaft, the lode is 2½ ft. wide, worth 8*l.* per fm. At Wheal Charles and Wheal Sparrow, in the 50, east of Gibson's shaft, the lode is 2 ft. wide—coarse in quality. In the 40, west of Turner's shaft, the lode is 2 ft. wide, worth 3*l.* per fm. In the 30, west of do., the lode is 3½ ft. wide, worth 10*l.* per fm. In the winze, under the 20, west of Turner's, we are not thinking to break any lode until holed to the 40. In the stopes, in the bottom of the 30, west of Turner's, the lode is 6 ft. wide, worth 14*l.* per fm.—Thomas Trevenes; Robert Williams: June 14.

WHEAL ADAMS.—There is nothing new in the engine-shaft to call forth a remark this week. The 40 fm. level is cleared, but we cannot see that it can be driven to advantage, whilst other important bargains adjacent are being worked; these bargains are the winzes sinking on the eastern lode, north and south of the cross-cut; the lode in the one south of Tonkings's pitch is 1 ft. wide, worth 6*l.* per fm.; in the north winze, however, it is 3 ft. wide, and worth 16*l.* per fm. The cross-cut extending west, in the 28 fm. level, south of the engine-shaft, is still in compact slate, of a dark blue colour; we have, however, intersected several small veins of lead ore during the week, showing symptoms of the end being near the lode; the cross-cut in the north end is still in favourable ground of a light blue slate, with a small stream of water issuing from it. The rise in the 18 fm. level, on the western lode, is progressing satisfactorily—the lode is about 2 ft. wide, consisting of an abundance of mundic, and about half a ton of lead ore per fm.; this rise will eventually serve as a ventilator, and will be made a shaft, through which most of the ores from this part of the mine will be drawn, to save, as we before observed, a vast expense in wheeling. We would the levels were in such a state, as to enable us to fix railways, which ought to have been the case in this, and in every other mine, where such large quantities of stuff is required to be removed, and be brought to surface. We shipped, on Wednesday last, 90 tons of blende, and expect to ship the remainder of the 260 tons in course of the week.—J. Prince.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is without important alteration, about 5 ft. wide—the north part of which is saving work; the lode in the western engine-shaft is about 3½ ft. wide, composed principally of capel, spar, mundic, and a little ore; in the 54 fm. level, east of this shaft, no lode taken down in the past week; in the cross-cut south, at this level, the ground is much the same for driving as last reported.—T. Rodda: June 15.

WEST WHEAL JEWEL.—In the 115 fm. level, east of Hodges's cross-course, on Wheal Jewel lode, lode not taken down in the present week. In the 100 fm. level, west of cross-cut, on same lode, lode 1 ft. wide, worth 3*l.* per fm.; in the winze, in the bottom of the 100 fm. level, on same lode, lode not taken down in the past week. In the winze, in the bottom of the 85 fm. level, west of cross-cut, on same lode, lode 2 ft. wide, with a very promising appearance for ore. In the 70, west of cross-cut, on same lode, lode 6 in. wide, looking more promising for ore than when last taken down. In the 30, west of Quarry shaft, on Tolcarne tin lode, lode 2 ft. wide, worth 10*l.* per fm. In the 12 fm. level, west of Quarry shaft, on same lode, lode 1 ft. wide, worth 7*l.* per fm.; in the stopes, east of Quarry shaft, in the bottom of this level, lode 3 ft. wide, worth 25*l.* per fm.; in the 12 fm. level, west of old sump shaft, on same lode, lode 2 ft. wide, worth 12*l.* per fm.; in the 12 fm. level east, on same lode, lode 9 in. wide, worth 5*l.* per fm.; in the adit end, west of Quarry shaft, on same lode, lode 1 ft. wide, worth 7*l.* per fm. In the stopes, east of Prior's winze, lode 3 ft. wide, worth 25*l.* per fm.—R. Johns; T. Bray: June 14.

WHEAL SAMSON.—I have the barrels of ores here at my house, which you wished to have sent up as samples to assay, and will send them to Plymouth the first opportunity. We have suspended operations on the north branch until further orders, and are driving on the south branch, in order the sooner to reach the junction of the lodes; this lode still continues 2½ ft. wide, with two beautiful walls. When we commenced driving, the lode was composed of flookan only; as we drive towards the junction, we break a great deal of grey mundic, sprinkled with rich silver-lead ore.—J. Spargo: June 9.

WHEAL SETON.—The following report was read at the account meeting on the 8th inst., the particulars of which appeared in last week's Journal:—In the 90 fm. level east, on Bull's lode, the lode is 1 ft. wide, containing occasional stones of copper. In the 80 fm. level west, on the south caunter lode, the lode is 5 ft. wide, and worth 20*l.* per fm. In the 70 fm. level west, on the same lode, the lode is 3 ft. wide, composed of spar, mundic, and stones of copper. In the 60 fm. level west, on the same lode, the lode is worth 30*l.* per fm.; the stopes in the back of this level are worth 35*l.* per fm. In the 80 fm. level west, on the north lode, we are carrying about 6 ft. of the north part of the lode, which is worth 60*l.* per fm. In the 70 fm. level west, on the same lode, we have intersected a cross branch here, which has disordered the lode, and is worth 10*l.* per fm.; the stopes in the back of this level are worth 150*l.* per fm. In the 60 fm. level west, on the same lode, we are carrying about 8 ft. of the south part of this lode, which is worth 80*l.* per fm.; the lode still standing to the north is worth 70*l.* per fm.; the stopes in the back of this level are worth 130*l.* per fm. In the 50 fm. level west, on the same lode, the lode is 5 ft. wide, producing about 2 tons per fm., and worth 12*l.* per fm.; the lode in the rise, in the back of this level, is 1 ft. wide, producing 1 ton of ore per fm. In the 40 fm. level west, on the same lode, the lode is still in disordered ground. In the 70 fm. level west, on Kneebone's branch, the lode is 1 ft. wide, and worth 8*l.* per fm. In the 60 cross-cut north we have intersected a small branch in the past week, but have not opened it—ground still favourable for driving. The ground in Tilly's shaft is still favourable; we expect to complete it to the 40 fm. level, below the adit, by the end of the present month. Cock's engine-shaft is nearly completed to the 13 fm. level, below the adit; we have to enlarge it to the 44 fm. level, which will take four months to accomplish. We beg to explain why the balance has been reduced—the expenses of repairs at Cock's engine, and pit-work for that engine-shaft, have not been less than 500*l.*; but for this extra charge, the balance would have been increased 350*l.* to 400*l.*—P. Rabey; S. Lean: June 8.

WHEAL TRELAWNEY.—Phillip's shaft is sunk 8½ fms. under the 42 fm. level. Trelawney's shaft is sunk 10½ fms. under the 22 fm. level. The lode in the 42 fm. level, north of Phillip's shaft, is 3½ ft. wide, and is worth 25*l.* per fm.; the lode in the same level south, is 2½ ft. wide, and worth 20*l.* per fm. The lode in the winze under the 32 fm. level, north of Phillip's shaft, is 2 ft. wide, and worth 20*l.* per fm. The lode in the winze under the 22 fm. level, north of Phillip's shaft, is 1½ ft. wide, and worth 10*l.* per fm. All the stopes are looking well. We have not yet cut the lode in the cross-cut at Vivian's shaft, but expect daily to do so.—Peter Clymo: June 14.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES.—*Gongo Soco, April* 13.—The Catta Preta woods will be most useful to us at Bananal, and we are already felling such as we need, and preparing a road for their removal. As some of the wood pumps had stood a long time in Vesey's shaft, several of them are not sufficiently sound to be worth removal to a new spot, where every thing will depend on the firmness of this part of our machinery—many, however, will serve again; and all these, as well as the iron-work from the defective ones, are already at Bananal, where they will all serve us in good stead. I regret to say, the Gongo Mine presents no improvement, and the eastern part is so exhausted, and without hope of improvement, that we shall be no longer able to keep Walker's stamps supplied; and the present returns from it will, probably, be the last. At Bananal we are using every possible expedition to repair the old machinery, so as to drain the mine, and fix our new pumps in the most advantageous positions. We have 14 cars, and between 40 and 50 mules, constantly at work, conveying wood and machinery; but at present we experience some difficulty in procuring residences for the requisite number of labourers, and what we have obtained are at such extravagant rents, that it will be far better to erect a few houses for our people, having, of course, due regard to economy in their construction. I fear we shall not be able to reach the gold until early in June; but we shall, in the mean while, take our measures so as to work on the vein, with as little interruption as possible after we commence. One of our earliest undertakings shall be a thorough examination of every part of the property, with a view to the discovery of yet unknown spots which may be deserving of a trial. You may rely that every possible exertion shall be made to put the mines into thorough working order, with as little delay, and at as moderate an outlay, as may consist with full efficiency.—Gold workings from the 3d to 12th April (8 working days), 2 lbs. 11 ozs. 5 dwts.—W. J. Henwood.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

Cleveland.—I am pleased to advise you, that the improvement which has taken place here continues, and we may fairly calculate on seeing this sett in a prosperous position. There is to be a meeting shortly, when we shall make some arrangements which, when effectually carried out, will very soon develope her promising lodes.

Gwinear Consols.—The important discoveries which we have made here fully warrants the erection of an engine of sufficient power to drain the mine to a considerable depth. At the next meeting we shall arrange for the engine, having one of requisite power already in view. We shall not sample our ore until the next sampling held in the western district, by which time we shall have a considerable increase.

Lelant Consols.—A considerable improvement is said to have taken place.

In Wheal Reeth they are erecting a new steam-engine, which is expected to go to work about the 28th June, when they will be able to properly drain the mine, and work on several valuable ends, which they have been compelled to stop working on, from the increase of water. This mine is now being worked by a spirited set of adventurers, who are determined to spare no expense in opening the mine, which, when done, will make one of the best speculations in that locality.

Lydford Consols is likely to make a good mine. During an absence of a few days, I visited this mine, and I can say, with the greatest propriety, she is very likely to pay dividends, if properly worked, before 2*l.* per share more is expended in labour. I have visited and inspected several mines in the locality of Tavistock, and many of them appear to me to be looking highly promising, and I shall be very disappointed if some of them do not become productive before long. I feel more than ever convinced, that this district will, with careful and efficient management, make important discoveries; but mining requires both time and capital. With these requisites, I have no doubt many new mines will yet be found, profitable and lasting.

Wheal Ash.—I beg to say, we are driving an adit level on the north lode, and, without any exception, I never saw a more promising lode in my life; it is about 4½ ft. wide, with an underlay of about 15 in. in a fm. north; it is composed of gossan, peach, and spar, with a large quantity of mundic and some spots of copper, but this is only 12 fms. deep; we are now making preparations to go below this level, and I fully expect, ere long, to have a good concern of ore. In bringing up the cross-cut to this lode, we drove on a north and south lead lode; this was a very promising lode, with good stones of lead. About 200 fms. east of this place we have an engine-shaft 35 fms. deep, and are putting out two cross-cuts, one north and the other south, to intersect the north and south lodes; these are not yet intersected, but we are not far from them; when seen on the surface, they had a fine appearance, being composed of gossan for 6 ft. wide.——The lode in the shaft to the east of the end, in the adit level, has considerably improved, being now full 6 ft. wide, and composed of peach, soft spar, gossan, with occasional stones of ore; this has, doubtless, been the cause of the numerous inquiries for these shares.

SOUTH WHEAL MARIA.—I was at South Maria last week, and saw some good stones of copper taken from the first cut lode north of the shaft; this lode, though split up in the adit level, seems to be more settled in the 20 level; and I think with the captain, that even this lode is so far improved as to leave little doubt of its further improving and becoming a productive lode. The second lode north seems to be a favourite of everybody's, which I do not wonder at, considering its goodness in the Shode pit and other openings on the back. It will occupy, I should say, at least another two months to intersect this lode from the present north cross-cut. There seems to be no indications as yet of a lode in the south cross-cut; but, as there are three lodes and a caunter within about 35 fms. south of the shaft, I think it likely that another two months will find the south end near, if not the caunter, and one lode intersected south of the shaft. I view South Maria adventurers now as in a tip-toe position; they are about to open, 50 fms. from grass, four lodes and caunter, two of which—also the caunter, as already seen—certainly are ores, good lodes, and, according to usual expectations from such appearances, one might suppose that they will, ere long, be rewarded with productive lodes, which, I think, every company proceeding with equal indefatigable exertions—to see these lodes 30 fms. from grass, at the small outlay of 2½*l.* per share—deserve.

TRESANCE MINES.—The following is an abstract of the reports received from the purser (Mr. R. Dalton) during the month of May:—The mine continues to be of the most promising description; and although our attention has not at all been directed to the making of any new discoveries, I am firmly of opinion, that many are to be made in this extensive sett, of the most important nature. We have picked up this month about half a ton of ore, averaging between 60 and 70 per cent.; one piece of the grey ore (not a picked one) I assayed the other day, and produced 65½ per cent., though we have the greater part very much richer—some 90, and even 95, per cent. pure, or refined copper. Saturday last (5th June) was our setting day; and as the ore on the north and south ends appear to be rapidly dipping, and as we have driven sufficiently far on the lode to prove it (say 40 yards), and, also, as the 12 fm. level, now driving, will have to be brought under the lode to unwater it, the driving further on the course thereof, would be only money thrown away. I have, therefore, for economy's sake, removed the men from this work, and have put four of them to the sinking of a new shaft, and two to the proving of a branch vein, which is running from the south end in a westerly direction, and which is bearing very fine yellow ore. The following work was set on Saturday:—A new shaft to sink from grass by four men, to be carried 7 ft. long within the timber, and 3 ft. 6 in. wide within the timber, if required—2 fms. extent; called shaft No. 1—taken at 4*l.* 10*s.* per fm. Also, the 12 fm. level end, to drive north, 2 fms. extent, or cut the lode—taken by six men, at 4*l.* per fm.; also, to drive on a new branch, on the south end of the lode, by day or stem work, and carefully preserving the ore—taken by two men. The underground hands employed are 12 men and two boys, which, with the tacklemen, &c., make in all 14 men and three boys. The new shaft is sunk between 3 and 4 fms.; yesterday, we cut a vein in the shaft, containing steatite, about 1½ in. thick, with three-quarters of an inch of (I think) malleable iron running through it. I shall assay it when time will permit; it is, altogether, what miners call a kindly place for ore. The 12 fm. level is proceeding on with all possible speed night and day; but continues very hard, having to be blasted.

WEST DOWNS (near Tavistock).—This sett has been taken up, operations commenced, and some excellent work for tin already broken on the Poldice lode. Several valuable lodes pass through this ground, and a considerable interest is held in the neighbourhood.

NORTH WALES SILVER-LEAD, COPPER, &c., MINING COMPANY.

SIR,—I will endeavour, if you will allow me, to give a reply to the letter of "A Theoretical Novice," which appeared in your Journal of the 5th inst., in which he sorely complains, "to use his own expression," of my imaginative idea, as regards the working of mines in this district. This I am not surprised at—my only wonder is, how "A Theoretical Novice," who states that he has been engaged in this district, should have made such mistakes as he has done with regard to the bearing of the lodes, distances, &c., &c., which I think, Sir, you will allow, proves that the knowledge he possesses of this country is extremely limited. However, I will proceed to give him the particulars he has sought for. An adit level, to cut the lode at Clogan, will extend to something like 5000 ft., and I believe this to exceed the distance; this level will cut two lodes previous to intersecting the Clogan lode, on which lodes shafts could be sunk for ventilation. I would ask "A Theoretical Novice," if he had any idea of the existence of such lodes?

Now, supposing that a level of this description were driven, the cost would fall very much short of the enormous sums of money which have been spent, without any beneficial returns. I have not the least hesitation in saying, that good returns may be made at the present time, at an expenditure of 400*l.* to 500*l.* on Clogan. Again, if the knowledge, which "A Theoretical Novice" says that he possesses, had induced him to seek for the lode west, allow me to tell him that he is again in error, for the lode in Clogan is making east with good course of ore, and the Vigra lode is evidently bearing west.

"A Theoretical Novice" hints, that I may be one of the consulting agents; I regret that I have not yet arrived at that honourable situation. Neither was I engaged in any of the previous "skilful managements," when the "bal" was "knacked." "A Theoretical Novice" advises me to turn my knowledge to a better purpose, instead of "attempting to mislead." I have no reason for doing so, though it evidently appears that he is somewhat "hurt" at the truth of my remarks; my only wish is, Mr. Editor, that I may be allowed to assert the truth, without attempting to mislead any one. And I firmly believe, had the mines of Clogan and Vigra been opened in the way I have suggested, they might have now been in operation, and with profit to every one connected. "A Theoretical Novice" included, and who might have become, long ere this, a much wiser man than—A WORKING MINER: *Dolgelly, June* 15.

ACCIDENTS.

Wheal Jane.—W. H. Gill was killed by the falling of a large mass of ground at surface, which he, with a companion, was engaged breaking.

Botallack Mine.—As R. Warren was following his employ as kibble filler at the 150 fm. level, a stone or some hard substance fell through the shaft, and struck him on the head, which deprived him of his senses for some little time; but he afterwards recovered so as to converse with those about him, and to be taken to the surface, and from thence to his house, where he died shortly after.

Shotton Colliery.—A. Cairns was killed by a fall of coal from the roof.

Blaendare Colliery, Pontypool.—E. Smith was killed by a fall of coal.

Varteg Hill Colliery, Pontypool.—On Friday week two miners were dreadfully burned by an explosion at Mr. John Vipond's.—On the following day three others met with a similar accident at the British Iron Company's works.

Bolton.—A. Watson was killed by a fall of coal at Messrs. Knowles and Scott's Colliery, Farnworth.—R. Barnes was also killed at these works: it appears that he was engaged in driving a tunnel in one of the mines, and whilst engaged in ramming a quantity of powder into a hole for the purpose of blasting, it unfortunately ignited, and, an explosion taking place, he was shattered to pieces.

Monkwearmouth Colliery, Newcastle.—As T. Allison was descending the old shaft in a corf, it came in contact with one of the butts, by which it was thrown over, precipitating him headlong down the pit, killing him on the spot.

St. Helen's Colliery.—M. Mason, a coal hewer, who, having been injured by a fall of coal in January last, underwent amputation of the leg at the time, died on the 2d inst.

Leasingthorne Colliery, near Church Merrington.—G. Vasey was killed by a fall of stone from the roof.

Parkfield Iron-Works, Wolverhampton—Fatal Accident to an Engineer.—As William Lloyd was standing on the top of the fly-wheel race, oiling the machinery, it is supposed the engine started unknown to him, for, in a few minutes, he was discovered by a boy entangled in the machinery. On the alarm being given, Wilkinson, a furnace-man, immediately ran to the spot, and pushed the fly-wheel off him, when the deceased was found quite dead, his head being dreadfully crushed. The occurrence appeared to be accidental, and, in some measure, owing to the deceased being short-sighted.

MINING COMPANY OF CORNWALL.—Mr. Anthony Joseph Michael La Baume, of Argyll-place, Regent-street, a medical electrician, and projector of the above company, has petitioned the Bankruptcy Court, for relief as an insolvent debtor. Illness was pleaded as an excuse for his non-appearance at the Court, on Thursday, for examination; but one of the creditors said he had seen Mr. La Baume, apparently well enough the previous evening, enjoying himself over his wine!

CWM AVON.—On Saturday last, the workmen belonging to the rail-mill of the Cwm Avon Company's Works, presented a handsome silver watch to Mr. Thomas Lewis, with the following inscription:—"Presented by the workmen of the Cwm Avon rail-mill to Mr. Thomas Lewis, as a small token of their esteem and regard."

SOUTH AUSTRALIAN ORE.—Among the few arrivals of late from foreign parts, owing to contrary winds, several have been, and of an extensive character, of copper ore from the British colonies and distant possessions, at the extreme south-eastern portion of the world. The vessel *Taglioni*, from Port Adelaide, has brought the large quantity of 328 tons 8 cwts.

THE SILVER AND COPPER MINES OF LAKE SUPERIOR.—The *Detroit Press* states that the rush to the copper country has already commenced. Several steamboats had left that city for Mackinaw, with the intention of trying to reach the Sault de Ste Marie, having cargoes of freight for the mineral region, and many passengers. There were some hundred strangers in Detroit, from all parts of the Union, awaiting an opportunity to go up. The travel to the mineral country is likely to be immense this season.

SAWING ENGINE.—At the Royal Institution, Prof. Faraday called the attention of the members to a working model of a sawing engine, invented by Mr. Cochrane. By this engine wood can be cut into curves of double curvature (i.e. curves in two planes). This is effected by the saw being made to turn on a vertical, while the wood is turned at the same time on a horizontal, axis.

WHEAL BARBARA MINING COMPANY.

A special general meeting of shareholders was held at the British Mining Offices, 41, Moorgate-street, City, on Saturday, the 12th inst.,

W. FENTON, Esq., in the chair.

The minutes of the meeting held on the 19th ult., were read.

The CHAIRMAN stated, the specific object for which the meeting had been convened—viz., that of confirming the resolutions passed at the preceding meeting, having for their object the placing the management of the mine on the Cost-book Principle, as being the most secure and simple—it having been proposed to work it under the Joint-Stock Companies Act, which, however, had been abandoned. Another object in view was, the removal of the business of the mine, so far as related to London management, to the British Mining Offices, where they were then assembled, as, by so doing, there would not only be economy—which was one of the first principles which should guide them, but they would have the advantage of the affairs of the company being conducted by practical and experienced parties. He (the chairman) availed himself of the opportunity which presented itself, of acknowledging, on the part of his co-adventurers and himself, the services rendered by the deputation from Manchester and London to the mine, and was much gratified to find, that the result of their inspection was so highly satisfactory.

A statement of the accounts was then submitted, whereupon, Messrs. Gouldesbrough and Shearman being appointed auditors, the same were examined and passed—the balance in favour of the mine being 179*l.* 12*s.* 6*d.*, exclusive of 810 reserved shares, estimated at 2430*l.*—thus making 2609*l.* 12*s.* 6*d.*

Mr. GOULDESBROUGH, as one of the deputation, expressed himself as well pleased with the prospects which the mine presented, confirming, as his personal observation did, the encouraging prospects and representations made, which he could now verify. Two boxes of stones taken from the lode, at a depth not exceeding 4 fms. from surface, had been forwarded from the mine, which were subsequently submitted to the meeting. It appearing to the meeting desirable that the 810 reserved shares should be now appropriated—the mine having been efficiently proved as to its value—it was resolved, that the same be offered to the present adventurers at 3*l.* per share—the amount so raised being placed to the credit of the company; such terms to be extended to the 12th of July, after which period, should any shares remain on hand, the committee to have power to dispose of them as they may deem fit.

A finance committee—composed of Messrs. S. Lewis, J. Truscott, D. Duthoit, W. Fenton, and D. L. Williams—was then nominated, as also a series of resolutions passed, which will be found in our advertising columns.

Thanks having been voted to the members of the deputation, the auditors, and chairman, the meeting adjourned; it being understood that meetings of the adventurers would be held every alternate month, and the Cost-book System be strictly adhered to—so that no debts or liabilities would be incurred beyond the amount in the hands of the finance committee.

COOMBE VALLEY SLATE COMPANY.

A special meeting of shareholders was held at the office, Whitefriars-street, City, on Tuesday, the 16th of June,

Mr. EMBERLIN in the chair.

The notice calling the meeting having been read,—the CHAIRMAN directed attention to the present state of the finances, which, according to the balance-sheet produced by the secretary, and which had been duly examined, showed a balance in favour of the company, and accounted for in the following manner:

Balance-Sheet—beginning 1st March, and ending 31st May—Three Months' Working.

To value of quarry			£500	0	0
Cash paid to bank—March, 224*l.*; April, 86*l.*; May, 13*l.* 17*s.* 6*d.*	321	17	6		
In hands of agents and secretary	50	0	0		
Shares taken	29	0	0—	£902	17 6
By 100 free, or paid-up, shares to original proprietors, of 5*l.* each				£500	0 0
Merchants' accounts				168	16 10
Labour, 104*l.* 12*s.* 7*d.*; commission, 19*l.* 10*s.*				124	2 7
Manager's and secretary's salaries				18	0 0
Miscellaneous travelling, surveys, leases, office expenses, advertisements, stationery, and various items in the formation of the company				64	13 4
Carting, horse-hire, and whim-work				8	5 8
Balance				18	19 1
Total				£902	17 6
Balance in favour of the company of cash, as per balance-sheet, 18*l.* 19*s.* 6*d.*; stock on hand, 25*l.*; value of machinery over cost, 50*l.*; 387 reserved shares, 387*l.*—making a total of				£480	19 1

The report from the captain of the quarry, together with that given by the secretary, was now read, and from which it appeared evident the works were in a very prosperous state, and held out hopes of a most promising nature, that they had hitherto been only preparing, but now were making returns; that, as there were large orders waiting to be supplied, he should recommend a call to be made; and, at the same time, the committee enter into arrangements for purchasing the estate.—The following resolutions were unanimously passed:—

That a call of 10*s* per share be made, payable within one month from this date.

That the estate (freehold) be immediately purchased.

That more men be put to work, and a sample cargo of slate be sent to London as early as possible.

That the 387 reserved shares be put into the market for sale, at not less than 25 p. ct. pm.

That any shareholder wishing to increase his present number of shares, should be able to do so at par.

That the following gentlemen be elected to complete the committee:—Mr. Spinks, of Dorchester, Dorset; Mr. Wonham, Bognor, Sussex; Mr. Assiter, Maidstone, Kent; Mr. Bowler, Milford, Surrey; Mr. Lowe, Guildford, Surrey; Mr. Beard, Coggeshall, Essex; and Mr. Hallet, Woodbridge, Essex—making 13 in number.

A vote of thanks to the chairman and committee having been passed, the meeting separated.

CAPTAIN'S REPORT.

I can now say that our quarry is looking well; and, by next Saturday night, I shall have many tons of slate made. The reason I have not been able to get roofing slate, is owing to not being able to sink at our lowest level, for want of the necessary lift of pumps; but now that I have them fixed, I shall very soon get a cargo of slate fit for the London market. I find the water will not require the pumps to go more than three strokes per minute; therefore, nearly all the power of the water-wheel will go towards working the saws and sanding machine. I find the rock is going down much harder, and the slate cleaves much better. I think we shall soon be able to get "Rags" and "Duchess;" we can now make plenty of "Scantle" and "Ladies," but, as they do not sell in this part, it is of no use making them. I have now got the quarry in working order, and have set several men on sawing, and two men cleaving slate. I am in want of 10 more men and boys at Hill, cleaving and sawing, for I find the slate comes from the quarry much faster than I can make it up. I [illegible] to Camelford, Delabole, and Boscastle, on Monday, and try and get some quarr[illegible] and boys; but I am doubtful whether I shall succeed, as the slate trade is very br[illegible] indeed, and good men are scarce. I should be happy to see any of the company down here at the quarry, then they would be able to see how the money has been expended, and what there is to show for it.—S. FINCH.

SECRETARY'S REPORT.

Among the various difficulties we have had to contend with, in carrying on the works of our little undertaking, probably none has presented a greater obstacle in the way than the water; but now, I am happy to say that that difficulty is overcome, we having a new lift of pumps fixed, which entirely drains the works. The piece of ground lately opened has been sunk on to about eight feet in the rock, from which we are now raising some very fine slabs. At the lowest level, the slate is sufficiently hard to be made into the common kind of roofing-slates; and we are now raising slate from the quarry so fast, that we must immediately set on more men and boys. The planing mill lately contracted for, is commenced, and is to be set to work on the 1st July. The 14-feet saws are being fitted up, and there are several men employed sawing by hand. Altogether, the quarry presents a very animating appearance, and every doubt of success (if any existed) must be now entirely banished. I have received orders for many hundred tons of slate, and I only want the remaining part of the machinery to get it into the market. I have contracted with a shipowner at 15*s.* per ton freight, during the summer; and also made arrangements at Bristol for other vessels, when we may want them. When we come to consider the very small sum of money that has been expended in commencing the quarry, the shallow depth at which we have found slate, and the exceeding short period of time we have been working before returns have been made, I think I am warranted in saying, that the Coombe Valley Quarry stands without a precedent in the annals of Cornish quarrying. In consideration, therefore, of the beds of slate having proved so abundant and good, I should earnestly recommend the company purchasing the estate, and for the following reasons—viz., the low price at which it is offered (freehold); the term of our lease being only 21 years; that we want dwelling houses for our men, and as we have plenty of materials on the spot, we can erect them at a cost of less than 25*l.* each; that they will increase the value of the whole property, as well as producing a rental of 4*l.* each per annum. I have made a survey of the estate, and find there is between seven and eight acres, consisting of common, orchard, meadow, and arable land, with about 50*l.* of small timber, consisting of elm, ash, and oak, which will be valuable on the quarry. I can let off enough ground to pay 7½ per cent. on the purchase money, and retain three acres of land, and the whole of the quarry, entirely free. I will engage to make the estate pay from 10 to 15 per cent. Besides having it our own, there are many advantages, for whatever we erect on it is for a permanency, and becomes real property. Should we only hold it as reversionary property, every succeeding year it would become less in value to us, and more to the freeholder; but by becoming ourselves the freeholders, we every year are increasing our own property; and the shares, instead of being considered of a fluctuating value, would assume the form of annuities. Immediately I am in a position to afford the necessary outlay, I shall commence putting up machinery for the manufacturing of every description of slate articles used in building generally, a description of which in my next report I hope to be able to lay before the company. In the mean time, I shall endeavour to turn all the produce of the quarry into cash, and thus prevent, if possible, making any further calls, other than the present one, this year. I have finally settled with the adjoining owner, H. Jewell, Esq., for a lease of the whole of the river, for the term of 50 years, and that I shall have during nine months of the year sufficient power to drive the whole of our machinery, which, I consider, will very shortly require 100 horses power to do its work.—C. J. RICHARDSON: Engineer and Secretary.

NANPEAN MINE.—At a meeting of adventurers, held at the offices, George-yard, Lombard-street, on Tuesday, the 15th inst., a statement of accounts was presented, from which it appeared that the cost from July, 1846, to May, 1847 (both inclusive), was 230*l.* 2*s.* 5*d.*—By call of 5*s.* per share on 1000 shares, 250*l.*: leaving balance in hand of 19*l.* 10*s.* 7*d.*—The accounts were received and passed; and a call of 5*s.* per share made payable forthwith.

BOLANOS MINING COMPANY.

The annual ge[illegible] offices, Duke-street, [illegible]olphi, on Thursday last, the 17th inst.

[illegible]RAY, Esq., in the chair.

The CHAIRMAN observed, that Sir C. Pri[illegible] being detained on a committee of the House of Commons, requested a short g[illegible] they would, therefore, proceed to the business, and, in the meanti[illegible] Sir Cha[illegible] might arrive.

Mr. HEAD (the secretary) then read the advertisement convening the meeting, after which H. Twiss, Esq.; Col. Nelthorpe; and W. F[illegible], Esq., having gone out of office by rotation, were re-elected; and Peter Martin[illegible] Esq., was re-elected an auditor.—Mr. HEAD then read the directors' report, which will be given in next week's *Mining Journal*.

From the statement of accounts from the 31st March, 1846, to same date, 1847, it appeared the balance in hand at previous date was 8383*l.* 16*s.* 11*d.*; proceeds of 22,500 (received April 18, 1846), 4575*l.* 19*s.* 4*d.*; interest on stock, profit and loss, 1*l.* 14*s.* 7*d.* = 13,253*l.* 8*s.*—By sundry payments, 529*l.* 9*s.* 11*d.*; bills payable, 4538*l.* 3*s.* 10*d.*; directors and auditors, 806*l.* 2*s.*; home management, manager, secretary, &c., postages, stationery, and printing, 1078*l.* 2*s.* 2*d.*; discount, 8*s.* 8*d.* = 6947*l.* 10*s.* 7*d.*, less due sundry persons, 276*l.* 10*s.* 4*d.*; to which add balance of cash in hand and at bankers, and 6000*l.* 3½ per Cent. Annuities, 6582*l.* 7*s.* 9*d.* = 13,253*l.* 8*s.*, as above. From the commencement the entire amount expended was 745,552*l.* 16*s.* 6*d.* The profit on the San. Clemente and Celestina districts, for the first quarter of 1847, was $3309 2 1; and El Bote Mine, $28,068 4 7.

The CHAIRMAN then observed, that before putting the adoption of the report and accounts, he should be happy to answer any questions. Mr. Kerrison was also in the room, who had just returned from Mexico, where he left everything going on favourable; that gentleman had inspected all their mines, and considering some one as superintendent should be always on the Bote Mine, Mr. Piacci, who was well-acquainted with it, had been appointed.

Mr. KERRISON gave a most encouraging account of the appearances of this property; there were four very large veins from 2 to 10 varas wide, which gave every indication of giving great riches in depth; he thought in a month they should cross-cut into two of them, and he had every hope as to the profitable result.—Mr. JOHN TAYLOR was of the same opinion, and it should be borne in mind that the great expenses in opening the mine for machinery, and other absolute necessaries, rendered the present profits no way proportionate to what they would be. The cross-cut at present driving was 30 varas below their present level, and he had no doubt of the ore being richer in depth.

The report and accounts were then adopted, and ordered to be printed and circulated among the proprietors; and thanks having been voted to the chairman and directors, the meeting separated.

REAL DEL MONTE MINING COMPANY.

The annual general meeting of shareholders in this company was held at the offices, Duke-street, Adelphi, on Thursday last, the 17th inst.

J. WRAY, Esq., in the chair.

The CHAIRMAN said, he had just received a note from Sir C. Price, stating that he could not get leave of absence from the Committee of the House of Commons, and begged, therefore, the meeting would excuse his not being present.—Mr. PHILLIPS (the secretary) then read the advertisement convening the meeting, and the directors' report, which will appear in the next week's Journal.

From the statement of accounts, for the year ending December 31, 1846, it appeared the last balance was 262*l.* 18*s.* 4*d.*; proceeds of bills from Mexico, 15,002*l.*; received on account of officers in Mexico, 141*l.* 18*s.* 4*d.*; interest, 273*l.* 7*s.* 4*d.* = 15,680*l.*—Paid on account of offices in Mexico, 5287*l.* 2*s.*; goods shipped for Mexico, 7501*l.* 6*s.* 3*d.*; insurances and interest, 149*l.* 9*s.* 4*d.*; directors and auditors, 806*l.* 3*s.* 9*d.*; home management, manager, secretary, clerks, printing, stationery, &c., 1142*l.* 8*s.* = 14,886*l.* 9*s.* 4*d.*; to which add balance at bankers and in petty cash, 793*l.* 14*s.* 8*d.*—together, as above, 15,680*l.* 4*s.*

The report and accounts were then adopted, and ordered to be printed and circulated among the shareholders; and, thanks having been voted to the chairman and directors, the meeting separated.

COLOMBIAN MINING ASSOCIATION.

The twenty-seventh annual meeting of shareholders was held, at the offices, Austinfriars, on Thursday, the 17th inst.

J. D. POWLES, Esq., in the chair.

The SECRETARY (Mr. Jones) having read the notice convening the meeting the CHAIRMAN proceeded to read the directors' report, as follows:—

The directors stated in their last annual report, the progress which was making in Marmato in preparing the machinery, by the means of which Mr. Hopkins expected to effect the entire extraction of the precious metals from the mineral, and therein to do away with the great loss which the company has always sustained in that process.

After a long and persevering trial with these newly-invented "separators," the use of them has been abandoned. They were not found to increase the quantity of gold extracted from the ore. After several previous experiments, the matter was put to the test by the reduction of distinct parcels of mineral under the old and under the new process—the one being conducted by Mr. Hopkins, and the other by the company's head dresser, Mr. Carlyon. The result showed no increase of produce in favour of Mr. Hopkins's machinery. The directors need not state that this has been a great disappointment to them. Mr. Hopkins had, previously to his leaving England, put up one of his separators, and had effected thereby the extraction of the whole of the precious metals contained in the ore. The experiment was necessarily conducted on a small scale; but as the process appeared to be a very simple one, there seemed good reason to believe it might succeed on a large scale; and Mr. Hopkins gave full proof of his own confidence in the efficiency of his process, by making his own profit dependent on his success. There is no doubt that considerable time has been lost, and considerable expense has been incurred, in making these experiments—circumstances much to be regretted in the present condition of the company.

In their last report, the directors stated that Mr. W. Degenhardt had arrived at Marmato, and taken charge of the mining department. They gave, at the same time, a report from him of the state of the several workings in the mines, and his view of the future prospects in working them. The result of the working for the past year shows a balance against the mines of 1301*l.* 17*s.* 2*d.* This loss occurred in the first six months of the year. During the last three months, the returns have exceeded the cost by about 33500.

The following is a statement of the quantity of fine gold produced at Marmato during the past year:—1846: March, 21 lbs. 3 ozs. 5 dwts.; April, 41 5 11; May, 28 5 16; June, 25 4 14; July, 21 6 8; August, 28 6 11; September, 30 3 7; October, 32 4 2; November, 35 6 9; December, 41 4 10.—1847: January, 42 4 19; February, 36 4 19—total, 385 lbs. 0 ozs. 2 dwts.

From this it will be seen, that the produce of the 1st quarter was 91 lbs.; the 2nd, 76; the 3d, 98; the 4th, 120—total 385 lbs.

The produce of the previous year was 357 lbs. 6 ozs.

[The Chairman then read a lengthened and fully explanatory report, from Mr. Degenhardt, on the condition of the various workings, to the 20th February last.]

The principal feature in the mining proceedings during the past year has been the opening out of the Pantano Mine, which had before been only examined. It is found to be a continuation of the Cien Pesos lode; and Mr. Degenhardt expresses a very strong opinion that it will prove a valuable mine to the company.

Mr. W. Degenhardt is conducting the management of the company's affairs with energy and ability; and if the expectations he entertains shall be realised, the directors will be enabled next year to present a more satisfactory report to the shareholders.

A law has passed in New Granada, during the past year, authorizing the export of gold on payment of a duty of 6 per cent., to include the quinto (government duty), smelting dues, and postage; under which a part of the produce of the mines has been sent to England, and it has proved advantageous to the company. By the last mail, the directors learn that a decree had just passed the Congress, reducing the dues on gold introduced into the Mint for coinage by 3½ per cent. Both these measures will give relief to the company.

Statement of Receipts and Disbursements, from 1st of June, 1846, to 31st May, 1847.

Balance per last statement—	RECEIPTS.				
Cash in the office, 5*l.* 15*s.* 4*d.*; at the banker's, 696*l.* 7*s.* 6*d.*				£702	2 10
Dividends on 4000*l.* Three per Cent. Consols, 116*l.* 10*s.*; fees on transfers, 1*s.*				117	5 0
Cash for bullion received from the Supia District				3829	11 0
Total				£4648	18 10
	DISBURSEMENTS.				
For account of the foreign establishment				£271	16 3
Interest on loans, 428*l.* 15*s.* 9*d.*; insurances, 116*l.* 14*s.* 2*d.*				545	9 11
Salaries and wages paid in England for account of the foreign establishment				341	9 1
Salaries of the secretary, clerk, postage, and incidental expenses				533	16 5
Expenses in forwarding two men, per *Thames* packet				145	14 3
Loans repaid				2566	2 4
Cash in the office, 2*l.* 18*s.* 5*d.*; at the banker's, 241*l.* 12*s.* 2*d.*				244	10 7
Total				£4648	18 10

Dr.	*Profit and Loss, 1st June, 1847.*				
1846, June 1—To balance brought forward			£2942	17 1	
1847, May 31—Charges of management			1233	16 5	
Interest			312	5 9—	£4488 19 3
Cr.					
1847, May 31—By transfer fees, 15*s.*; balance, 4488*l.* 4*s.* 3*d.*					£4488 19 3

Dr.	*Balance-Sheet, 1st June, 1847.*		
Mines in Colombia		£436,769	4 8
Agents in Bogotá		269	15 2
Superintendent of the Supia establishment		346	19 3
Supia Mines, 4829*l.* 1*s.* 5*d.*; Pamplona Mines, 2359*l.* 14*s.* 4*d.*		7,188	15 9
Parting Office		2,535	4 8
Bullion in New Granada, 1993*l.* 11*s.* 3*d.*; ore from New Granada, 42*l.* 5*s.*		2,035	16 3
3 per Cent. Consols, 4000*l.*; general stores, 1318*l.* 17*s.* 4*d.*		5,318	17 4
New Granada Mining Company		1,118	19 7
Office furniture, 129*l.* 14*s.* 2*d.*; profit and loss, 4488*l.* 4*s.* 3*d.*		4,617	18 5
Cash in the office, 2*l.* 18*s.* 5*d.*; at the banker's, 241*l.* 12*s.* 2*d.*		244	10 7
Total		£510,449	19 7
Cr.			
Capital stock		£496,500	0 0
Loans, 3754*l.* 12*s.* 11*d.*; the directors, 6042*l.* 15*s.* 6*d.*		11,797	8 5
Estate of the late W. Lake, 192*l.* 4*s.* 2*d.*; bills payable, 3000*l.*		3,192	6 2
Total		£510,449	19 7

The CHAIRMAN, in a few brief remarks, regretted that they were not able to furnish a more satisfactory report, in consequence of the failure of Mr. Hopkins's plan of reducing the ores—the experiments on which had, of course, entailed some expenses on the company's part, although Mr. Hopkins had not benefitted by it, as, from the confidence he entertained of the success of his in-

vention, his remuneration depended on the favourable result of this process: it would be seen by the statement, that the result of the year's working was a balance of 1360*l.* against the purchase, including the expense of purchase of machinery; at the same time, from the report, they have a much more flattering account to lay before the proprietors at the next annual meeting, in consequence of their having introduced the blanket system in dressing their ores, as, although the system of dressing by the "separators" was a failure, it was the cause of Mr. Hopkins applying the blanket to the mill he erected—a mode of dressing which proving highly advantageous, and a most important improvement upon the former system, and more especially in dressing "tails" and "Lavadero remains."

The three directors going out by rotation (Messrs. Hurry, Powles, and Routh) having been unanimously re-elected, as also the auditors (Messrs. H. Ewbank and T. O. Powles), thanks were voted to the chairman and directors, when the meeting separated.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

The half-yearly general meeting of proprietors was held at the London Tavern, on Thursday, the 17th inst., when, upon the chair being taken by Mr. THOMAS GIBSON, the meeting proceeded to the re-election of Joshua Walker, Esq., and George Thomas, Esq. A resolution to such effect having been carried, the chair was occupied by JOSHUA WALKER, Esq.

The CHAIRMAN expressed his thanks for the honour conferred on him on his re-election, having been placed in the position of chairman from the period when Gongo Soco was first worked. The directors had deferred convening the meeting until the present day, the meeting being held much later than ordinary; but the position in which the company was placed, was such as rendered it incumbent on the directors, either to recommend the abandonment of the enterprise, or its prosecution, by transferring their powers to the new mine, which, he was happy to say, had been obtained, and the necessary arrangements effected, whereby the property had been secured, and transferred to the company. He had only to state, that the prospects of the company were of a highly satisfactory and gratifying character, and that he had every reason to congratulate the shareholders on the present state of their affairs.

The report, with the accounts, was then read by Mr. George Thomas (the acting director):—

DIRECTORS' REPORT.

The usual half-yearly meeting of the shareholders was postponed from the 20th ult., until this day, in the expectation that the directors would be able to announce the completion of the bargain for a 50 years' lease of the mines of Bananal and the adjoining properties, and the occupation of the same by the force of the association now in Brazil. The directors have now the pleasure to make this announcement, and to state to the present meeting that despatches from Mr. Henwood have been received, advising that he had taken legal possession, was engaged in an active removal of miners and labourers from Gongo, and in the repair of the existing machinery already on the spot, to effect, with the least possible delay, the drainage of the old mine, and to enable our miners to work on the gold which was in sight at the last inspection. As this has no doubt, ere now, been effected, the directors expect to receive in England a remittance from Bananal during the present year. With a view to more extensive operations, an adit will be driven, a new engine-shaft sunk, and new and more powerful machinery erected without loss of time. On the 7th of this month, copies of the mining reports on these properties from the chief commissioner, Capt. Joel Hitchens, and the mining captains (all of whom possess great experience on gold formations in Brazil), were sent to each proprietor, and these afford such full details upon every point connected with them, that little is left to the directors at this meeting but to say they have received letters of subsequent date to the above reports, confirming the highly favourable opinions therein expressed, and to repeat their congratulations to the shareholders on the final and satisfactory termination of the long pending negociation for these very valuable properties.

These new estates, which have every advantage of wood, water, and pasturage, are about 23 miles from Gongo, and a few miles only from Catta Preta. These distances will enable Mr. Henwood to avail himself of the facilities which they offer as to houses, buildings, workshops, machinery, &c., at the commencement of operations at Bananal. The price of the new properties is 22,000*l.*, being a reduction of 3000*l.* from the sum first authorised. This saving has been accomplished by the able arrangement of the chief commissioner, Mr. J. Henwood, to whom the association is much indebted for his care and activity. The whole of the drafts have been drawn on the chairman, and will be duly honoured. A call of 2*l.* per share has been made, payable (as by notice sent under date of 7th inst., to each proprietor) on or before Thursday, the 8th day of July next, and the directors doubt not it will be cheerfully and readily responded to by the shareholders.

By the *Seagull* packet, which sailed on the 6th inst., three miners and three lads have been sent to Brazil, and a similar increase will be made to the force by the July packet—it being the intention of the directors to give to their excellent chief commissioner, all the support he may require, to take full advantage at once of every point connected with this important mining property. The auditors' statement for the half-year, ending the 31st December, 1846, will be found at the end of this report.

The quantity of gold for the last six months, ending 31st December, 1846, has been 130 lbs. 1 oz. 6 dwts. 20 grs., including 13 lbs. 8 ozs. 11 dwts. 20 grs. from Catta Preta. This half-year's produce realised 4985*l.* 11s. 6d., to which, adding the palladium sold, and the interest on the Rio deposit stock, as shown by the auditors' statement, makes the total six months' receipts, 5355*l.* 6s. 3d. The expenditure for the same period has been 10,354*l.* 0s. 3d., leaving a deficit on the half-year of 4998*l.* 14s. To six months' outlay at Catta Preta has been 2171. 17s. 3d. Towards these deficiencies, Rs. 80,000-000 of the 6 per Cent. Brazil Stock have been sold, under the orders of the board, which produced 7349*l.* 16s. 1d., leaving Rs. 8400-000, equal to about 800*l.* sterling, still remaining invested on the 31st. December, in addition to 31,687*l.* 11s. 4d., 3½ per Cent. Stock (reserve fund) in the trustees names in this country.

The operations at Catta Preta Mine have been abandoned, agreeably to the intention intimated in the last half-yearly report. The produce from Gongo Soco has been, of late, very unsatisfactory; and the workings would not have been so long continued on the large scale they have been, except for the purpose of giving employment to the force it was so desirable to keep together until it could be employed at Bananal, &c.

It will still be advisable to keep a part of the establishment at Gongo Soco, for the working that mine on a limited scale, in the hope that a plan which has been submitted to the directors, not involving outlay of capital by the association, but which will yield a revenue by way of royalty, may be realised. The plan has been approved by able and experienced mining agents in Cornwall, and has been submitted to Mr. Henwood by the last packet. Mr. Henwood has not furnished any recapitulation of the last half-year's proceedings, his time having been wholly engrossed with the arrangement for the new mines. The establishment, on the 31st of December last, consisted of 624 persons.

In conclusion, the directors take the opportunity of expressing the confidence they entertain in the chief commissioner, the officers and men under his direction, and in the general administration of the company's affairs in Brazil; they, at the same time, assure the proprietors, that no care or diligence shall be wanting which the directors can give at home, to promote the efficient development of these new properties, and to render them profitable to the shareholders.

Dr. *Financial Statement, from 1st July to 31st December, 1846.*

To balance of statement on 30th June, 1846	£5502	5	0
Cost of 514*l.* 19s. 2d. stock, 3½ per cents.	491	15	8
General expenses	5052	1	5
Salaries and Wages in Brazil, 4626*l.* 18s. 10d.; ditto England, 675*l.*	5301	18	10
Catta Preta Mine—being the amount expended there (including 29*l.* 0s. 9d. for wages) this half-year	217	17	3
Total	£16,565	18	2
[Balance, as per statement	3369	0	2
Arrears of salaries and wages due by the association, and moneys reserved for passages home, 31st December—say	3888	1	3
Cr.			
By half-year's dividend on 31,172*l.* 12s. 2d. 3½ per Cent. Stock (less the sum of 14*l.* 15s. 8d. income tax) due in October	£ 491	15	8
Half-year's dividend on Rs. 88,400-000 6 per Cent. Brazilian Home Stock, due 1st July, Rs. 3652-000, Exchange 26½d.	295	11	9
Proceeds of Rs. 80,000-000 of the Brazilian 6 per Cent. Home Stock, sold	7349	16	1
Proceeds of 34 lbs. 2 ozs. 5 dwts. 22 grs. of gold dust, per *Seagull* packet, including the proceeds of the silver extracted therefrom	1340	0	0
Proceeds of 47 lbs. 4 ozs. 19 dwts. 18 grs. of gold dust, per *Express* packet, including the proceeds of the silver extracted therefrom	2011	1	10
Proceeds of 6 lbs. 10 ozs. 5 dwts. 6 grs. of gold from Catta Preta, received per *Seagull* packet	331	9	8
Proceeds of 4 lbs. 8 ozs. of gold from Catta Preta, received per *Express* pack.	200	0	0
Estimated value of 21 lbs. 5 ozs. 10 dwts. of gold dust (after deduction of duties), not yet received	903	0	0
Proceeds of palladium sold	74	3	0
Balance	3369	0	2
Total	£16,565	18	2
[Assets of the association, on 31st Dec., 1846, exclusive of the mines and estates originally, and others subsequently purchased, the sums expended thereon, mining implements, cattle, stores, &c., on hand at Gongo Soco and Catta Preta—viz.:			
Reserve fund—stock	£31,687	11	4
Less sold and divided amongst the shareholders in May, 1842	10,000	0	0
Stock, 3½ per cents., standing in the names of the trustees	31687	11	4
Loans and investments in Brazil, including Rs. 8400-000 6 per Cent. Brazilian Home Stock, standing in the name of the association	7192	1	5
Office furniture and palladium			

The following is an abstract of the reports received from Mr. W. J. Henwood, and the mining captains:—

[Bananal, &c., is about 23 miles from Gongo Soco, and only a few miles from the company's property at Catta Preta. These distances will enable the association to avail itself of the facilities which the houses, buildings, workshops, machinery, pastures, and woods of these estates afford. The price of the new properties is 22,000*l.*, being a reduction of 3000*l.* from the sum first authorised, which saving has been accomplished by the chief commissioner.]

These mines are situate on the south-eastern side of the Caracas Mountains: the formation in which the mines are worked is of a slaty structure, and composed of thin laminæ of micaceous iron ore and quartz. The rocks bear about 10° west of north, and incline east at an angle of 45°; within a short distance, however, their dip is reversed, although maintaining the same direction. The jacotinga and iron slate are traversed by veins of from 1 to 4 or 5 in. of soft manganese and iron, mixed with small quantities of quartz, and a little talc. These occasionally contain very large quantities of gold. That portion of the mine more recently worked has been sunk, where two cross-veins intersect the jacotinga: its width 8 ft., length 12 ft., and depth about 15 fms. from the surface. One of these veins has hitherto yielded gold at the stamp only. The vein has, since May, 1844, been only deepened 8 to 10 ft., but has been very productive. Capt. Treloar, with Mr. Henwood, some three years since, extracted about 8 lbs. of gold in two or three hours; and on the 15th October, about 10 lbs. of gold was extracted in the like time. This portion of the vein was 6 ft. long, and 6 in. in breadth, in the lowest part of the mine, which, assuming a continuance, would yield 120 lbs. per fm., worth fully 4060*l.* An obstacle to the prosecution of the mine is the quantity of water, which is not, at present, less than 800 or 900 gallons per minute, the temperature being as high as 96°. The pumps are worked by a water-wheel 37 ft. in diameter, and 2 ft. 10 in. in breast, which, however, would merely serve to keep the mine drained at its present bottom, and that imperfectly. There is also a small stamping-mill: 250 or 300 fms. from the mine, an adit might be brought up, which would reach the present workings at a depth of 15 or 20 fms.—150 fms. of which would be open cutting; the remainder would, however, be more expensive. During the dry season, the water-power is not enough to keep the mine in fork. The contiguous estate of Durao, however, has an abundant supply, and may be acquired. There is also a much larger stream, sufficient for any purpose required, which may be brought to the mine at a cost of from 600*l.* to 800*l.* There is also an ample supply of timber, and the pastures are ample for all purposes. To put the mine in an efficient state, would require 8 to 12 months, and cost from 5000*l.* to 7000*l.*; but should the vein continue rich, 4000*l.* or 5000*l.* worth of gold might be extracted in the meanwhile. Two captains, 25 or 30 miners and artificers, and 60 negroes, would be ample.

From the mining captains' report, we learn that the bottom of the mine is about 14 fms. from surface, with a rich vein of gold from 4 to 6 ft. in length, and 1 to 3 in. in width. We dug the vein from 6 to 8 in. in depth, and the stuff broken therefrom contained about 10 lbs. of gold, worth from 3000*l.* to 4000*l.* per fm. We are of opinion there are other gold veins in the same formation, having seen several veins similar in appearance. The water is very considerable, and will be some impediment; but, by sinking a new engine-shaft, and erecting a powerful water-wheel, it could be drained, and we doubt not but that gold will be taken out, which will pay the outlay. Morro das Almas and Santa Rica, where there has been a great deal of washing, are well worthy of trial. There is a water-wheel 37 ft. diameter, and 2 ft. 10 in. breast, working one 16-in. double drawing-lift, 9 fms. in length; one 14-in. bucket-lift, 9 fms. ditto; and two sinking-lifts, one 10 and the other 8 in. in diameter, about 5 fms. ditto. The report is signed by Capts. Thomas Blamey, Thomas Pengilly, John Luke.

A comprehensive report from Capt. J. Hitchens was submitted to the meeting.

The CHAIRMAN observed, that the report having been read, he felt called upon again to advert to the remarks, which he considered it was his duty to make, in opening the proceedings of the day. He congratulated the proprietors on the accession of the new mine, and the expectations he, in common with his co-directors and proprietors, entertained. In reply to a shareholder, the chairman stated, that 3*l.* per share would be required—2*l.* now, and the other 1*l.* about Christmas. The company might be considered as having entirely abandoned Gongo Soco, which, however, would be taken up by other parties on a royalty—the directors having sent over to Mr. Henwood for his opinion, prior to entering into any conclusive arrangement. The party propose taking it on lease for 21 years, paying a royalty, which latter had not, however, been determined.

SOUTH AUSTRALIAN MINING ASSOCIATION.—A special meeting of shareholders was held at Payne's Auction Mart Tavern, Adelaide, on Wednesday, the 23d January last, for the purpose of taking into consideration the qualification of directors, the scale of voting at general meetings, the time for registration of scrip, and the appointment of a successor to the retiring resident director. The old system for the qualification of directors, of 20 5*l.* scrip shares, was decided upon unanimously; and, notwithstanding an amended scale for voting was proposed by Mr. NEALE, the old plan was decided upon by a majority of 480. It having been proposed that Mr. Stocks act as gratuitous resident director until April, it was put to the vote, and negatived by 20 to 7—it appearing the general opinion that the nine directors should act in concert, and that there should be a paid superintendent.—A vote of thanks having been passed to the chairman, the meeting separated.

ALFRED CONSOLS.—At a meeting of adventurers, held at the offices, George-yard, Lombard-street, on Tuesday last, the 15th inst.,—THOMAS FIELD, Esq., in the chair,—the accounts for March and April were examined and passed, from which it appeared, that the balance from last account was 967*l.* 6s. 7d.; labour cost, subsist and merchants' bills, 1273*l.* 3s. 8d.; and copper ores sold, 1304*l.* 16s. 4d.—thus reducing the balance to debit of mine to be carried to next account (April ores not being credited) to 935*l.* 13s. 11d.—The minutes of the last meeting were read and confirmed; and it was resolved, that the salary of Captain White be increased to 7*l.* 7s. per month, and that of Mr. R. Nicholls to 6*l.* 6s, commencing with May last.—The following report from Capt. M. White was read:—In handing you my report of these mines for the meeting on Tuesday next, I beg leave to say, that since the last two monthly meetings, Field's engine-shaft has been sunk 4 fathoms 3 feet, which makes it 10 fms. 3 ft. under the 10 fm. level, and the lode in sinking is 6 ft. wide, worth from 30*l.* to 40*l.* per fm. The shaftmen are preparing for sinking under the 20 fm. level, which I hope will take place on or about the middle of the week; the 20 fm. level is driven east of Field's engine-shaft 4 fms., where the lode is from 4 to 6 ft. wide, all saving for copper ore; the 20 fm. level is driven west of Field's engine-shaft 3 fms., where the lode is 6 ft. wide, worth 50*l.* per fm.—these levels are looking well. The 10 fm. level has been driven east of Field's, or engine-shaft, during the last two months 8 fms., where the lode has been from 6 to 7 ft. wide, composed of gossan and copper ore; this level is not driving now; the men are rising over the level, for the purpose of ventilating it; the lode in the rise is 6 to 7 ft. wide, and all saving for copper ore; the 10 fm. level is driven west for the last two months, 4 fms. 4 ft., where the lode is about 7 ft. wide; 3 ft. of the north part is principally composed of gossan, the remaining 4 ft. of the south part is good for copper ore. The adit level, east of Wyld's shaft, is suspended for the present, whilst preparations are making to sink Wyld's shaft under the adit level. The adit level, west of Laity Farm house, has been driven for the last two months 6 fms. 4 ft., and the lode in the present end is from 2 to 3 ft. wide, with gossan, spar, mundic, and occasional stones of lead ore. The number of tutwork men for the present month is 50, and 48 tributers, at the average tribute of 6s. 6d. in the 1*l.* I consider our prospects of the most cheering nature; and I believe I am quite safe in saying that the mine, on the whole, never looked so well as at the present. Our sampling, which takes place on the 22d inst., will be about 800 tons.

CONDUBROW.—At a meeting of adventurers, held at the mine, on Tuesday, the 8th inst., a statement of accounts was presented, showing—labour for April and May, 642*l.* 18s. 11d.; merchants' bills, 195*l.* 8s. 10d.; E. W. W. Pendarves, Esq., dues of ores sold, 33*l.* 10s. 8d.; balance due to purser end of March, 198*l.* 5s. 11d. = 1070*l.* 4s. 4d.—By ores sold 1st April, 610*l.* 16s. 10d.: leaving present balance, 459*l.* 7s. 6d.—The accounts having been examined, were allowed. The following report from the manager (Capt. Nicholas Vivian) was read to the meeting:—The engine-shaft (Pryce's), sinking under the 50 fm. level, is down 5 fms. The lode, which is underlaying only 6 in. in a fathom southerly, is 4 to 5 ft. wide, very promising, yielding tin, and good stones of grey and yellow ore—price, per fm., 16*l.* for the remainder of the lift. The 50 cross-cut, driving north, to intersect Llandower's lode, is about 35 fms. west of the engine-shaft—price, per fm., 12*l.*; in the 50 fm. level east the lode is 2½ ft. wide, driving at 45s. per fm., worth 7*l.* to 10*l.* per fm. for tin, with stones of rich copper ore; rising on the back of the 50 fm. level, east of Pryce's at 45s. per fm. for 12 ft. long, worth 10*l.* to 12*l.* per fm. for tin, and some ore. In the 30, driving east, on Llandower's lode, at 7*l.* per fm., the lode is 2 ft. wide, very promising, with stones of ore; in the 30 west, driving at 7*l.* 10s. per fm., the lode is 2 ft. wide, and worth 15*l.* to 20*l.* per fm. The 10 east, driving on Llandower's lode, at 3*l.* per fm., and 5s. in the 1*l.* tribute for stoping, is worth 30*l.* per fm., or upwards; the winze, sinking under the 10 fm. level west, is producing 2 to 3 tons per fm. of fair quality; the 10 fm. level, east of engine-shaft, on the main lode, is in course of clearing, and will probably be finished in the present week, when a rise will be commenced, to hole to a winze against Hope's shaft, preparatory to driving the 10 east; in the deep adit, driving west, on Llandower's lode, by six men, the lode is 3 ft. wide, and worth 24*l.* per fm. The ores sold on the 3d inst., with the tin to sell in June and July, to be credited at the next meeting, together will net 900*l.*, or more.

GREAT WHEAL WILLIAMS.—The two-monthly meeting of adventurers was held at the Globe Hotel, Plymouth, on Monday, the 7th inst.—J. POTTER MACQUEEN, Esq., in the chair.—Col. Broughton's resignation of his shares was accepted; it was also resolved—That the shares of the following shareholders be now and from henceforth forfeited to the company, by virtue of the 2d rule, for the government and carrying on of this mine; the purser having duly sent to the said shareholders a proper notice, in conformity with the said rule, and the call, or calls, due from them being still in arrears—viz.: Mr. J. Tremlett, 80 shares—due 20*l.*; Lord Suffield, 30—15*l.*; Mr. J. Lane, 10—10*l.*; Mr. W. Stovin, 40—20*l.*; Mr. W. James, 2—10s.; Dr. Holdsworth, 5—1*l.* 5s.; Mr. R. Serjeant, 2—1*l.*; Mr. F. G. O'Brien, 5—1*l.* 5s.; Mr. M. Noel, 2—10s.; Mr. E. Lorraine, 4—1*l.*—Total shares, 180; total due, 70*l.* 10s.—The accounts, as produced, were allowed, and passed.

TAVY CONSOLS.—A general meeting of adventurers was held at the Central Hall, Plymouth, on Tuesday, the 8th inst.,—Capt. JOHN PAULL in the chair: It was resolved,—That the forfeiture of Mr. Andrew's share, as determined at the last general meeting, be confirmed: the forfeiture of two shares, standing in the name of Richard Sleman at the last general meeting, but transferred two days previously to John H. Snell, under the circumstances, be restored to John Snell: the forfeiture of John Dillworth's share, and Henry Fox's two shares, at the last general meeting, be confirmed: the following shares be forfeited to the company, being two calls in arrear—viz., T. G. Meaton, James Rockey Sleman—two each: the accounts and vouchers be allowed and passed, and, with the reports, circulated among the shareholders.—The report and estimates of the managing committee having been read and approved, a call of 10s. per share be made, to be paid immediately.—The thanks of this meeting be given to the committee of management, for their efficient services, and that the same gentlemen be re-elected for the next two months: and this meeting authorises them to proceed in carrying out their plans at once: the purser's salary to be advanced two guineas per month.—The thanks of the meeting were given to the chairman, for his able conduct in the chair.—The following report from Capt. Martyn was read to the meeting:—Our water-engine works exceedingly well; the water at present is very easy, not two strokes per minute. We have commenced cutting the plat in the 24 fm. level; the lode here is about 3 ft. wide, producing some good stones of yellow ore. I hope, in about three weeks, to begin sinking the engine shaft, where the lode is from 4 to 5 ft. wide, composed of mundic, spar, and yellow ore—the latter not in quantity enough to save; but, from its appearance, we may shortly expect it will prove productive. We have also commenced driving on the cross-course, or lead lode, in the 12 fm. level north, at 40s. per fm. The lode is about 1 ft. wide, producing good spots of lead; and, when we have holed to the winze that is sunk from the shallow adit, which we expect to do shortly, it will give good ventilation, and enable us to proceed with vigour to drive on the copper lode west of the cross-course; as there is a good lode in the bottom of the shallow adit, we may expect that it will be productive. We have stopped the stopes in the back of the 12 fm. level, and let a pitch, to extend 10 fms. west of the shaft, to four men, at 10s. in the 1*l.*, and they pay all expenses. At present it is looking very well, and the men are likely to get good wages. We sampled, on Thursday last, 55 tons 4 cwts. 3 grs. copper ore—price not yet known; and have about 20 tons, dressed and undressed, now on the floors.—The following is the report of the managing committee:—Your committee have much pleasure in submitting the following statement of the affairs of this mine to their co-adventurers, and beg to inform them that nearly all the machinery necessary for carrying on the underground operations, and for dressing the ores that may be raised on the most economical principles, are provided, and included in the estimate of future liabilities. An opportunity having presented itself a short time since, a purchase was effected at a public sale, of a grinder, eight heads of stamps and water-wheel, all with cast-iron axles, and a jigging machine, and house, &c., attached, with all other necessary appendages, on exceedingly reasonable terms. These materials and machinery are now in process of shipment from Penzance to the mine; and the committee hope, by the next general meeting, to be enabled to inform you, that the whole is erected and in operation. Owing to this purchase, and having immediately to pay for the same, it is necessary funds should be provided; and, as the company have always been anxious to keep out of debt, they consider it most advisable that the general meeting should make a call of 10s. per share, which will pay off all liabilities, and produce sufficient funds for carrying on the works with energy.—The accounts showed balance in hand, when all calls are paid up, of 435*l.* 19s. 9d.: among the receipts were—for silver-lead ore, 83*l.* 16s.; from Williams and Co., for copper ore, 197*l.* 14s. 7d.; and for 55 tons of ore, sold on the 3d inst. (say), 250*l.*

MERIONETHSHIRE SLATE AND SLATE SLAB COMPANY.—A meeting of shareholders was held, at the offices of the company, on Thursday, the 10th inst., when the accounts for the first six months, and a report of the progress and prospects of the undertaking, were produced. Notwithstanding the depression now so prevalent, this undertaking seems to have maintained its position. It appears that the company have received and spent 2000*l.*, in wages, machinery, and freights. Their sales have just commenced; and slates to the amount of 500*l.* have been sold. There are about a 1000*l.* worth of slate and slab just arrived at their temporary wharf, at Rotherhithe; and they have ready for shipment 800 tons of slabs at the quarries, with roofing slates, worth, when landed, 3500*l.*—this is the produce of the first eight months' work. Such being the case, there can be no doubt as to the prospects of the concern; and it was stated at the meeting, that very little more than one full call (about 3000*l.*) was all that was needed to double the returns from the works. We were both pleased and surprised to observe, that the entire sum for preliminary expenses was only 230*l.* We make no comment on this, for none is needed; but we heartily wish the company success.

WHEAL BEAM TIN MINE.—This mine is situated near Ashburton, in Devonshire, extending over 700 acres, and adjoins the western boundary of the well-known and productive "United Ashburton Consols Mine"—the seven lodes of which run through the Wheal Beam sett. Upwards of 6000*l.* worth of ores have been returned; and the mine is in full work, and considered by all tin miners as a highly-promising adventure. There is a lease for 21 years—18 of which are unexpired; and the present proprietors (four in number), wishing to work on a larger scale, propose to divide the mine into 1770 shares, at 6*l.* each, of which a call of 1*l.* will be required for the future working of the mine. For further particulars, we refer to our advertising columns.

WINTER QUARTERS OF MINERS IN THE HIGHEST ANDES.—As it was in the middle of the summer, I could not help reflecting what a dreadful abode this must be in winter, and I inquired of our guide and of the miners concerning its climate in that season. They at first silently pointed to the crosses, which, in groups of two, and three, and four, were to be seen in every direction; and they then told me, that, although the mine is altogether inaccessible for seven months, in winter, yet that the miners used to be kept there all the year. They said that the cold was intense, but that what the miners most dreaded were the merciless temporales, or storms of snow, which came on so suddenly that many miners had been overtaken by them, and had perished when not 150 yards from the hut. With these monuments before my eyes, it was really painful to consider what the feelings of those wretched creatures must have been when, groping about for their habitation, they found the violence of the storm unabating and irresistible. It was really melancholy to trace, or to fancy I could trace, by the different groups of crosses, the fate of the different individuals. Friends had huddled together, and had thus died on the road. Others had strayed from the path, and from the scattered crosses they had apparently died as they were searching for it. One group was really in a very singular situation. During a winter particularly severe the miners provisions, which consist of little else than hung beef, were gradually failing, when a party volunteered, to save themselves and the rest, that they would endeavour to get over the snow into the valley of Maypo, and return, if possible, with food. They had scarcely left the hut when a storm came on, and they perished. The crosses are exactly where the bodies were found. They were all off the road. Two had died close together; one was about 10 yards off; and one had climbed to the top of a large loose fragment of rock, evidently to look for the hut on the road. The view from San Pedro Nolasco, taking all together, is certainly the most dreadful scene which in my life I had ever witnessed. —*Sir Francis Head's Journey Across the Pampas.*

ARTESIAN WELLS AT VENICE.—As the first well of the kind bored on the Campo St. Paolo has yielded satisfactory results, another has been made, of late, on the same locality. At a depth of 60 metres, strata of grit were attained, which being perforated, yielded an abundant stream of water. The column rises 8 ft. above ground, and yields every minute 160 litres of water. It created a thorough astonishment with the assembled multitude, that the stream of water, being brought in contact with a flame, burnt in a most vivid manner, which is produced by the carburetted hydrogen gas it contains. The gas, which is often concomitant of artesian springs, has been used for ages past as a means of lighting coal-mines in China, where it astonished some of the French missionaries, even before the introduction of gas-lighting in Europe. It is, however, an important question, whether such hydrogenized water as that of Venice will turn out potable.—*Irish Rail. Gaz.*

CASTINGS IN IRON.—A novelty in the fine arts has been introduced by the Colebrookdale Company, long celebrated for the excellence of their castings in iron. We refer to statues in cast-iron (to be seen at the shop of Mr. Andrews, ironmonger, in Dudley-street), of Sir Robert Peel and Mr. Cobden—the likenesses are admirable, and the attitudes well chosen. We notice them more immediately, however, for the purpose of calling attention to the great advance in the art of casting iron which they display, rivaling, as they do, the finest castings of Berlin in sharpness and delicacy of outline—they more resemble pieces of statuary than castings in iron, such as they have hitherto been.—*Wolver. Chron.*

PERPETUAL MOTION.—One J. Huit, a frame-work knitter, of Hinckley, states, that after 19 years' intense study, he has discovered perpetual motion. His machine, he says, is capable of working any mill, or turning any motive-power, without the aid of steam, water, or air, having an inherent power of its own—an arm which never tires. He says he has ruined himself by his study, and to any Englishman, not to a foreigner, who will advance 20*l.* for the erection of a machine, he will intrust the secret, and thus make him a partaker of its advantages.

FALL OF A RAILWAY ARCH, AND LOSS OF LIFE.—Last evening, an accident occurred in the Borough, upon the works in connection with the North Kent, or London and Gravesend Railway, in consequence of the falling of an arch, passing over Great Russell-street, at its northern end. During the latter part of the afternoon, it appears that several of the men, employed in the erection of a viaduct, were engaged in removing the struts and centrepieces from the brickwork forming the permanent way for the new line. But a few minutes had elapsed after the removal of these timber supporters, before a cracking was heard overhead, and before it was possible to give any alarm, or to warn the parties who were passing under the bridge at the time, the whole of the new work came down, with a tremendous crash. One man was at work, laying concrete at the time over the archway. He was brought down with the mass of rubbish, but fortunately he escaped with life. As soon as it was possible, workmen were set to work to remove the rubbish, and in a short time three persons were found alive, but seriously injured. They were removed to Guy's Hospital, where every attention was paid them. The bodies of a respectably dressed man, and that of a middle-aged woman, quite dead, and frightfully mutilated, were afterwards found. This is hoped to be the extent of injury, as by 11 o'clock the whole of the rubbish had been searched.

DOWLAIS IRON WORKS.—The Marquis of Bute and Sir John Guest have not, we are informed, come to terms respecting the renewal of the lease of the Dowlais Works. Notice has been given for stopping one pit.—*Cambrian.*

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 178,004*l.*, thus accounted for:—100,181*l.* for the conveyance of passengers only, 40,814*l.* for the carriage of goods, and a remainder of 37,009*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 35,339*l.*, when the mileage was about 2,292.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3 p.c.	£ 250 0 7	£ 190
Chester and Birkenhead	15	658,253	2½	668 10 3	703
Dublin and Drogheda	35	689,248	3½	829 1 7	906
Dublin and Kingstown	6	349,736	9	911 12 4	1277
Dundee and Arbroath	16½	456,323	6	—	308
East Lancashire	28	814,417	—	841 8 10	—
Eastern Counties	194	6,513,026	7	11312 0 8	8508
Eastern Union	17	227,253	—	1184 12 4	—
Edinburgh and Glasgow	46	2,112,136	6	3303 0 7	3309
Glasgow, Paisley, and Ayr	53	1,567,281	7	2610 7 3	2263
Glasgow, Paisley, & Greenock	23	835,918	2	1225 7 4	1226
Great Southern and Western	56½	1,343,718	—	1391 2 2	—
Great Western	241	9,714,939	8	20535 1 2	21483
Ipswich and Bury	26½	393,768	—	—	—
London and North Western	378½	18,042,004	10	39139 0 0	40244
London and Blackwall	4	1,102,717	1½	1232 12 4	1410
London, Brighton, & South Coast	112	8,109,667	7	8112 10 5	8558
London and South-Western	127	4,278,780	9	9360 14 9½	8049
Manchester & Leeds	117½	5,036,391	5½	8448 8 8	6105
Manchester, Sheffield, & Lincolnsh.	49½	1,078,108	5	1900 14 0	1985
Midland Company	329½	7,862,274	7	17916 4 0	16630
Newcastle and Berwick	9	1,184,079	5	769 10 5	—
Newcastle and Carlisle	65	1,184,080	5	2085 13 1	1820
Norfolk	70½	1,190,689	7	1980 16 10	1418
North British	72½	1,489,958	—	1874 11 4	—
Preston and Wyre	30	423,014	2½	—	933
Shrewsbury and Chester	15	354,945	—	400 11 5	—
South Devon	20	1,061,283	5	711 19 8½	—
South-Eastern	148½	5,888,411	3½	8394 0 7	8073
Taff Vale	30½	888,411	6½	1419 8 3	1261
Ulster	25	358,353	5½	592 12 4	572
York and Newcastle	157½	1,712,317	9	7520 9 1	—
York and North Midland	162½	2,483,256	10	6366 0 0	5161

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 15 6—Buddle's West Hartley 17 3—Carr's Hartley 17 3—Chester Main 16 6—Davison's West Hartley 17 3—Delaval Hartley 16 3—Dipton Tanfield 15 6—Hasting's Hartley 17 3—New Tandeld 16—Ord's Redheugh 15—Stanley Tanfield 15—Wylam 16 3—Wall's End Bewicke and Co. 17—Eden Main 17—Braddyll's Hetton 18 to 18 3—East Hetton 16 3—Haswell 18 6—Hetton 18 6—Lambton 18 3—Shotton 17 9—Stewart's 18 6—Adelaide 18—Tees 18 3—West Tees 15 3—Anthracite 25—Cowpen Hartley 17 3—Derwentwater Hartley 17.—Ships at market, 37.

WEDNESDAY.—Carr's Hartley 17—Chester Main 16 6—Davison's West Hartley 17—Delaval Hartley 16—Derwentwater Hartley 16 6—Wall's End Burnhope 17—Shotton 18—Stewart's 18 6—Adelaide 18—Killingworth 16 9.—Ships, 14; sold, 7; unsold, 7.

FRIDAY.—Holywell Main 16 6—Wylam 16 3—Wall's End Burnhope 16 6—Braddyll's Hetton 17 9—Bell 17 6—Haswell 18 6—Stewart's 18 6—Kelloe 17 6—Tees 18.—Ships, 19.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 196 7
3 per Cent. Reduced Ann., 88¼ ⅛
3 per Cent. Consols Ann., 88¼ ⅛
3 per Cent. Annuities, —
3½ per Cent. Ann., 99⅞ 90
Long Annuities, 9¼
India Stock, 16½ per Cent., —
3 per Cent. Consols for Acc., 88 ⅛
Exchequer Bills, 1000*l.* 2d., 7 10 pm.

Belgian Bonds, 4¼ per Cent., —
Dutch, 2½ per Cent., 58⅝ ⅛
Brazilian, 5 per Cents., 84 3½ 3¼
Chilian, 6 per Cents., 92¼ 3
Mexican, 5 per Cents., 20½ ⅛
Spanish, 5 per Cents., 22¼
Ditto 3 per Cents., 34⅝
Portuguese, 4 per Cents., 32
Russian, 5 per Cents., 110¾

MINES.—The mining share market has not materially varied for the past few weeks. There has been a demand for a few shares in some of the favourite mines, but they have invariably fallen back after the shares required had been obtained—consequently, those who were desirous of selling at higher prices have been necessitated to abide by forced sales, which may account for the variation in our quotations. The cases have, therefore, been almost isolated, where several shares in the same mines have maintained the same prices. Perhaps a better opportunity never presented itself for obtaining a secure and safe investment than at the present period; for shares in some of the best dividend mines may now be procured at from five to seven years' purchase, paying from 20 to 40 per cent. per annum.

The dullness of business not only pervades our market, for we learn, from our country correspondents, that but few transactions have been effected in the country during the past week.

There has been an inquiry for Trelawneys, Mary Anns, Treleighs, Condurrows, Tavy Consols, Stray Parks. West Wheal Marias were in request about a fortnight since, and a rise consequently took place; the supply having responded to the demand a great many shares changed hands—a reaction has, however, since taken place, although we are advised that the mine is in a far more promising position than before.

Cleveland, we learn, has improved; bnt we are not aware of any transactions having taken place.

There has been some business done in Franco, Plymouth Wheal Yeoland, Exmoor Wheal Eliza, and Birch Tor.

In the City article, in our Journal of last week, after noticing the grant of the sett to the east of Plymouth Wheal Yeoland, to the adventurers in that undertaking, we inadvertently omitted the words "the directors of the Callington Mines," which made it appear that the adventurers in this (Plymouth Wheal Yeoland), instead of the Callington Mines, "*had, at their weekly meeting on Wednesday last, declared a dividend of 1l. per share*;" we are induced immediately to correct this error, lest it should be considered an attempt to impose on the mining public. This mine continues to maintain its character, and shares have changed hands freely at our quotation price. Thus having occasion to refer to the Callington dividend, we cannot refrain from observing, on looking over the statement of accounts, that we feel at a loss to account for the credit given to the workings at Kelly Bray of 401*l.* 13*s.* 11*d.*, being a large proportion of 1000*l.* dividend declared, and, as we read the statement made, the actual profits do not amount to more than 674*l.*

An improvement has taken place in Wheal Ash, near Tavistock, and an active inquiry for shares has been made during the past few days.

Shares in the following mines have been done—viz.: Stray Park, West Wheal Maria, Devon and Courtenay, Tavy Consols, Trelawney, East Crowndale, Franco, Plymouth Wheal Yeoland, Wheal Ash, Birch Tor, Exmoor Wheal Eliza, Treleigh, Tremayne, West Wheal Providence, Kirkcudbrights, &c.

In the foreign share market there has been a demand for, and several large transactions in, the Imperial Brazilian shares; this arises from the obtaining and annexation of an additional piece of ground, known as Bananal, from whence great expectations are anticipated. In Bolanos some business has been done, as well as in St. John del Rey and Del Monte. Australians have been dormant this week, and many sellers are in the market, at lower quotations.

RAILWAYS.—At the commencement of the week there was much activity in the railway share market, which has progressed in a favourable state with the advance in Consols, and an improvement in prices was the result; towards the middle of the week the market was still well supported, though, perhaps, there was less disposition to buy from the decline in Consols; but the market closed yesterday in a very favourable state.

MEETINGS.—DUTCH-RHENISH RAILWAY: a meeting of the provisional committee, held at Liverpool. Their report stated that they had obtained the confirmation of the arrangements named in their former report. The directors were in treaty to join the Dutch-Rhenish with the Prussian line; it recommended that the balance in hand (400,000*l.*), be made available, to prevent any call till that sum was spent; report agreed to.—LEEDS AND THIRSK: special meeting; the directors were authorised to borrow the money allowed by their special act.—SOUTH STAFFORDSHIRE JUNCTION: special; a bill was approved to amalgamate with the Trent Valley, Midland, and to construct the Cannock and Worley branches.

At Messrs. Lamond's sales, on Tuesday, there was a considerable improvement in the price of shares, and the tone of the market was healthy in the absence of great demand. On Friday there was considerable confidence exhibited, and a larger amount of business than usual was done at better prices. Some mining shares were sold—Real del Monte obtained 3*l.*; Callington, 37½*l.*; and United Mexican, 2*l.*

HULL, THURSDAY.—The share market has been well supported throughout the week, and a good demand has existed for York and Newcastle, Newcastle and Berwick, and North British, for the two former particularly. All the country markets, as well as London, continue to be influenced chiefly by the weather.

LATEST CURRENT PRICES OF METALS.

LONDON, JUNE 18, 1847.

	£ s.	£ s. d.		£ s.	£ s. d.
IRON—Bar *a*..Wales..*ton*	0 0—	8 10 0	COPPER—Ordin. sheets,*lb.*	0 0—	0 0 11
„ ..London ..	9 10—	9 15 0	„ bottoms .	0 0—	0 0 12
Nail rods „	0 0—10	10 0	YELLOW METAL SHEATHING	0 0—	0 0 9½
Hoop(Staf.) „	0 0—11	15 0	TIN—Com. blocks *g*...*cwt.*	0 0—	4 12 0
Sheet „	0 0—13	0 0	„ bars	0 0—	4 13 0
Bars „	0 0—11	5 0	Refined	0 0—	4 15 0
Welsh cold-blast foundry pig ..	4 10—	5 5 0	Straits *h*	4 4—	4 5 0
Scotch pig *b*, Clyde	3 3—	3 5 0	Banca	4 10—	4 12 0
Rails, average	0 0—	8 15 0	TIN-PLATES—Ch., IC *i*, *box*	1 8—	1 11 6
Russian, CCND *c*..	0 0—	——	„ IX ...	1 14—	1 17 0
„ PSI ...	0 0—	——	Coke, IC	1 5—	1 6 0
„ Gourieff	0 0—	——	„ IX	1 11—	1 12 0
„ Archangel	0 0—13	10 0	LEAD—Sheet *k* .....*ton*	0 0—19	10 0
Swedish *d*, on the spot	0 0—11	15 0	Pig, refined	0 0—20	10 0
„ Steel, fagt.	0 0—16	5 0	„ common	0 0—18	15 0
„ „ *kegse*	0 0—15	0 0	„ Spanish, in bd.	17 10—18	0 0
COPPER—Tile *f*	0 0—97	0 0	„ „ for arrival	0 0—19	15 0
Tough cake	0 0—98	0 0	SPELTER—(Cake) *l* on spot	19 15—20	0 0
Best selected	0 0 101	0 0	„ „ for arrival	0 0—19	15 0
			ZINC—(Sheet) *m* export.*	0 0—	27 0 0
			QUICKSILVER *n* .....*lb.*	0 0—	0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ¼ and ½-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

The transactions in metals have been so very unimportant since last week's *Mining Journal*, that we have no new feature to notice. The few orders which are on hand are withheld, under the expectation of lower prices. Our quotations are, with a slight exception or two, the same as last week.

GLASGOW PIG-IRON TRADE, JUNE 17.—We have had a very dull market, for the last week, in pig-iron: there has been so little speculation in the article for some time, that it is now chiefly held by the makers themselves; in the meantime they are firm, although the demand is lessened. The transactions this week have been of a small character, and the buyers principally consumers. The price of mixed Nos. may be quoted nominally at 64s. 6d. to 65s.—cash, free on board. It is expected the miners will submit to the reduction in the wages, and that there will be no strike.

PRICES OF METALS IN AMERICA.

NEW YORK, MAY 29, 1847.

	$ cts.	$ cts.		$ cts.	$ cts.
COPPER—Sheathing ....*lb.*	0 23½	— 0 0	IRON—Engl. & American..	0 5¼	— 0 6
„ Old	0 18½	— 0 18¾	„ Hoops do.....*cwt.*	3 50	— 6 50
„ Braziers'.....	0 24	— 0 25	NAILS—Cut 4 dz. 40 ....*lb.*	0 4¼	— 0 4½
„ Pig	0 18	— 0 0	(3d 1 c. & 2d 2 c. more)		
„ Bolts.....	0 24	— 0 25	„ Wrought, 6 to 20....	0 10	— 0 14
LEAD*—Pig	4 62½	— 0 0	„ Horse-shoe	0 17	— 0 21
„ Bar	0 5	— 0 0	SHOT—Patent	0 8¾	— 0 0
„ Sheet	0 0	— 0 5¼	„ Buck	0 6¾	— 0 0
IRON—Pig, Eng. & Scotch...	0 0	—35 0	SPELTER—In plates	5¼ 0	— 0 0
„ „ American, No. 1	0 0	—32 50	STEEL—German.....*lb.*	0 10¾	— 0 13
„ „ common 22	50	—25 0	„ English Hoop L....	0 13	— 0 13½
„ Bar, RPSI..... 100	0	102 50	„ Spring	0 5¾	— 0 5
„ „ Swedish 87	50	—90 0	„ Trieste .....*boxes*	0 0	— 0 0
„ „ American, old..85	0	— 0 0	„ American	0 4¾	— 0 5
„ English refined 85	0	— 0 0	TIN—Block, South Amer.*lb.*	0 0	— 0 0
„ „ common .70	0	—72 50	„ Ditto, East India	0 0	— 0 0
„ Sh. Russian, 1st qual.	0 11½	— 0 12	„ In plates, ½ dx. bx..	9 0	— 9 25

* Duty—Pig and bar, 3 ; old and scrap, 1½ ; sheet, 4 cts. per lb.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending June 12, was 16,359; amount of money, £68 1s. 7d.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7 ..	12
512	Albert Consols.....	1 ..	2½
1024	Alfred Consols	4½..	40
235	Andrew and Nangilles	25½..	16
10000	Ayrshire Iron Company	2½..	1½
1624	Balleswidden	9 ..	13
128	Balnoon Consols.....	25 ..	25
10000	Banwen Iron Co.....	2 ..	—
1000	Barristown	4½..	18
4000	Bedford	2½..	3½
128	Besore Lead Mine.....	14 ..	10
315	Birch Tor Tin Mine....	24½..	6
9000	Blaenavon	50 ..	30
100	Botallack	175 ..	140
120	Brewer	5 ..	7
10000	British Iron, New, regis.	10	17½–18¼
—	Ditto ditto, scrip.....	10 ..	19
128	Budnick Consols	52½..	40
128	Burthy	20 ..	21
100	Bwich Cwmorfin	20 ..	—
128	Callestock	17 ..	50
1000	Callington	19 ..	20
256	Caradon Consols.....	47 ..	3¾
256	Caradon Copper Mine	9½..	1
256	Caradon Mines	22½..	17
256	Caradon United	24 ..	10
256	Caradon Wh. Hooper...	20 ..	4
1000	Carn Brea	15 ..	100
2048	Carnarthen Consols ..	2 ..	2
112	Charlestown	200 ..	100
166	Cleveland.....	9 ..	6½
512	Coatlithe Hill	½..	1½
1900	Combmartin	7½..	4½
500	Comblawn	1½..	1½
128	Comfort	45 ..	80
256	Condurrow	20 ..	30
2560	Cook's Kitchen	14 ..	5½
1000	Coombe Valley Quarry	1 ..	1½
1000	Copper Bottom	1 ..	5
1024	Cosheen	4½..	10
240	Craddock Moor	15½..	15
128	Creeg Braws	120 ..	150
500	Cubert Mine	12½..	23
2048	Dartmoor Consols	2 ..	3½
7100	Derwent	8½..	5
1024	Devon&CourtenayCon.	5½..	2½
1000	Dhurode	2 ..	5
186	Dolcoath	30 ..	50
2560	Drake Walls	4 ..	4
10000	Durham County Coal..	45 ..	9
256	East Alvenney	3 ..	10
112	East Caradon	42 ..	42
2048	East Crowndale	4½..	2
512	East Combe Silver-Lead	6½..	6½
128	East Pool	5 ..	20
100	East Rellistian	22 ..	40
9000	East Tamar Consols ..	1½..	2
—	East Wheal Albert....	1 ..	3
94	East Wheal Crofty....	280 ..	310
256	East Wheal Fortune ..	2 ..	3
128	East Wheal Rose	50 ..	1300
2048	East Wh. Rough Tor ..	— ..	2
—	East of Scotland Iron Co.	2½..	1½
123	East Wheal Seton	14 ..	20
256	Exmoor Wh. Eliza.....	3½..	10
512	Fowey Consols	40 ..	45
20000	Galvanised Iron Co. ..	10 ..	9½
10000	Gen. Mining Co. for Irel.	2 ..	1½
2048	Georgia Tin Mines	1½..	1½
256	Gonamena	31½..	70
128	Goonvrea	4 ..	½
244½	Grambler & St. Anbyn	— ..	20
100	Great Consols	1000..	400
256	Great Callestick Moors	22..	25
2560	Great Michell Consols	1½..	4
256	Great Resugga Moor ..	2 ..	4
512	Gt. Wh. Rough Tor Con.	6½..	38
1800	Great South Tolgus....	2 ..	2
100	Grogwinion	5 ..	—
1000	Gunnis Lake	1½..	3
256	Gwinear Consols.....	5 ..	15
1000	Hanson.....	14 ..	2
1000	Harrowbarrow Old Mine	8½..	3½
800	Hawkmoor	3 ..	2
6000	Heigneton Down Con..	½..	2½
256	Herodscombe.....	½..	6
256	Herodsfoot	14 ..	11½
10000	Hibernian	12½..	1½
—	Hobb's Hill	4 ..	5
1000	Holmbush	18 ..	8
937	Kirkcudbrightshire....	5½..	10½
2048	Lamherooe Wh. Maria	9 ..	3
2048	Lanivet Consols	4 ..	2
200	Larkholes.....	1 ..	3
128	Lelant Consols	90 ..	60
160	Levant	— ..	90
1000	Lewis	15 ..	6½
1280	Llancynfelin	6 ..	—
1000	Llwyn Malees	5 ..	—
3600	Llynvi Iron	50 ..	60–65
256	Lostwithiel Consols...	7 ..	7
128	Ludcott	3 ..	3
4000	Marke Valley	10 ..	2½
5000	Mendip Hills	2 ..	1½
128	Metha	23 ..	120
20000	Mining Co. of Ireland	7 ..	6½–7½
256	New East Crowndale..	3½..	3½
128	North Fowey Consols..	25 ..	20
100	North Pool	45 ..	225
70	North Roskear	10½..	400
512	North Treburget	2 ..	3
100	North United	72 ..	15
256	North Wh. Abraham ..	½..	12
262	North Wh. Leisure ..	1½..	3½
128	North Wh. Providence	2½..	8
15000	Northern Coal Co.	23 ..	2
1200	Old Delabole Slate Co.	25 ..	50
2000	Pantdrainiog Slate Co.	2½..	2½
128	Par Consols.....	900..	900
256	Penhallow Moor	[redacted]	4
4000	Pennant	[redacted]	3
100	Penrhiw	50 ..	65
256	Pentuan Wheal Mary..	2½..	6
128	Pen-y-Cefn Mine	50 ..	55
1280	Perran St. George Un.	13 ..	20
128	Perran Wh. Virgin....	9½..	65
512	Plymouth Wh. Yeoland	4½..	22
2048	Prince Edward.....	1½..	1½
112	Providence Mines	35 ..	45
256	Redruth Consols.....	3 ..	10
10000	Rhymney Iron.....	50 ..	30
256	Rose Consols	10 ..	11
1000	Rosewall Hill	1 ..	5
256	Rosewarva Mines	— ..	12
—	Shotts Iron Company..	50 ..	65
2500	Silver Valley	4 ..	2
128	South Caradon	10 ..	410
2000	South Dolcoath	2 ..	2
256	Sth. Friendsh. Wh. Ann	14 ..	14
200	South Harvannah	23 ..	26
9000	South Tamar	½..	¼

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	South Tolgus	2½..	18
800	South Towan	10 ..	1½
256	South Trelawney	15½..	10
128	South Yeoland	16½..	20
128	South Wheal Basset ..	110 ..	75
124	South Wh. Francis....	100 ..	230
256	South Wh. Hope	— ..	5
1000	South Wh. Maria.....	2½..	3½
256	South Wheal Rose....	11½..	1
10000	Southern&Western, Irish	2 ..	4–5
280	Spearne Moor	30 ..	40
256	St. Austell Consols....	8 ..	14
94	St. Ives Consols	— ..	320
128	St. Michael Penkivel ..	5 ..	10½
1000	Stray Park	43 ..	29
9600	Tamar Consols	5 ..	5½
1024	Tavy Consols	3½..	5
6000	Tincroft	7 ..	9
1000	Tin Vale Consols.....	2 ..	2½
256	Ting Tang	15 ..	10
128	Tokenbury	143½..	10
256	Trehane	2 ..	22
5000	Treleigh Consols.....	6 ..	4
2000	Trenance	2 ..	—
256	Trenow Consols	30 ..	25
96	Tresavean	10 ..	250
120	Trethellan	5 ..	27½
120	Treviskey and Barrier	130 ..	160
256	Trewollack	20 ..	20
128	Trewellard	12 ..	26½
6000	United Hills.....	5 ..	¼
100	United Mines	300 ..	400
256	Wellington Mines	15 ..	30
128	West Basset.....	45 ..	25
256	West Caradon.....	20 ..	168
128	West Cargoll	2 ..	12
512	West Fowey Consols ..	40 ..	15
256	West Grambler	7 ..	8
—	West Kekewich Consols	— ..	3
256	West Providence.....	1 ..	18
200	West Seton.....	40 ..	60
—	West of Scotland Iron Co.	210..	212
120	West Trethellan	5 ..	35
256	West United Hills	2½..	4
256	West Wh. Friendship..	7½..	4
3845	West Wheal Jewel....	11 ..	2½
2560	West Wh. Maria.....	1½..	1½
256	West Wheal Shepherd.	5 ..	2½
256	West Wheal Tolgus ..	21½..	3
256	West Wheal Treasury	19 ..	18–20
5200	Wicklow Copper.....	5 ..	14½
184	Wheal Adams	41 ..	10
1000	Wheal Agar.....	— ..	8
256	Wheal Albert	10 ..	8
128	Wheal Acland.....	13 ..	2
256	Wheal Allen	2 ..	5
237	Wheal Anderton.....	16½..	26
128	Wheal Ann	— ..	50½
128	Wheal Arvose	3½..	4
1024	Wheal Ash	2½..	12
120	Wheal Bal	5½..	20
2560	Wheal Barbara	1½..	3
256	Wheal Benny	6½..	5
256	Wheal Blencowe	8 ..	12½
256	Wheal Bucketts	20 ..	22
256	Wheal Byon Consols..	½..	¼
256	Wheal Calstock	3 ..	4
136	Wheal Clifford	190 ..	190
1024	Wheal Concord	6½..	1½
128	Wheal Courtenay	— ..	20
6000	Wheal Curtis	1½..	1½
256	Wheal Dyke.....	12 ..	13
256	Wheal Fortescue	5½..	12
512	Wheal Fortune Consols	3½..	6½
2048	Wheal Frederick.....	2 ..	2
388	Wheal Franco	27 ..	38
1024	Wheal Grace	2 ..	2½
128	Wheal Harriet.....	45..	50
2048	Wheal Holwell	1½..	1½
256	Wheal Jane.....	16 ..	30
256	Wheal Kekewich.....	4 ..	4
256	Wheal Louisa.....	7½..	12
112	Wheal Margaret	79 ..	250
256	Wheal Maria (Hayle)	19 ..	15
1024	Wheal Maria	1 ..	350
4000	Wheal Martha Consols.	5 ..	2
512	Wheal Mary Ann	5 ..	25
256	Wheal Mary Consols..	38 ..	25
256	Wheal Mary (Lanivet)	6½..	4
256	Wheal Maude.....	1½..	1½
128	Wheal Pollard	12½..	12
210	Wheal Prospect	4 ..	7
120	Wheal Reeth	27 ..	30
128	Wheal Rose.....	60 ..	45
2048	Wheal Samson	— ..	20
99	Wheal Seton	214 ..	850
256	Wheal Sisters	29½..	35
256	Wheal Sophia	3½..	10
128	Wheal Spearne	10 ..	75
128	Wheal St. Ann	9 ..	15
260	Wheal Trelawney	7½..	120
256	Wh. Tremaine(St. Ervan)	1½..	20
256	Wheal Tremayne	35 ..	32½
128	Wheal Trew.....	20 ..	21
256	Wheal Trevenna	3 ..	4
92	Wheal Tryphena.....	140 ..	300
128	Wheal Veniand	12½..	10
256	Wheal Vlow (Perrans.)	½..	¼
184	Wheal Vyvvan.....	— ..	60
256	Wheal Williams.....	2 ..	18

FOREIGN MINES.

5000	Alten Mining Company	14½..	4
15000	Asturian Mining Co. ..	10 ..	6
20000	Australian	2 ..	6½
10000	Anglo-Mexican Co...	100 ..	1
12374	Ditto Subscription	25 ..	2½
3000	Bolanos	150 ..	6½
2000	Ditto Scrip	15 ..	6½
12000	Brazilian Imperial	20 ..	3¾–4
10000	Cobre Copper Co.	40 ..	25½
8500	Colombian Co. regis...	55	4¾
5000	Ditto Scrip	5¼	
5000	Copiapo Mining Co....	14 ..	3½
10000	General Mining Ass'n.	20 ..	15½
5000	Kinzigthal Mining Ass.	2 ..	3
20051	Mexican Company....	59 ..	—
2000	Mexican & South Amer.	7 ..	3
5000	Mocaubas & Cocaes ..	25 ..	4¼–5
29320	Rl. del Monte, regis.	28¾..	nr. 3¼
	Ditto unregistered		
	Ditto Red Debentures	— ..	16
	Ditto Black ditto	— ..	14
	Ditto Loan Notes ....150 ..		97½
7000	Royal Santiago	10 ..	5
2000	Pachuca Mines	4 ..	4½
11000	St. John del Rey	15 ..	7
43174	United Mexican	28½..	2½

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.
2000	Adelaide	5 ..	6
600	Barossa Range	4 ..	24
2464	Burra Burra.....	5 ..	90
436	Grand Junction	15 ..	28
200	Greenock Creek	5 ..	12
100000	Scottish Invest. Co....	1 ..	1½
18	South Para	15 ..	50
1000	Poonawurta	— ..	9½–10
400	Princess Royal.....	— ..	250
10000	Royal South Australian	— ..	85½
600	Victoria.....	2 ..	2
500	Wakefield	2 ..	2

SOUTH AUSTRALIA AND NEW ZEALAND.

100000	North British Australasian (Kaw-aw, &c.).....	1 ..	1½

**** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£21½ 22
20,000	British North American	50	5	44 45
20,000	Colonial	25	6	15½ 16
—	Commercial of London	20	6	22 23
4,000	Ionian State	25	6	24½ 25
60,000	London Joint-Stock	10	6	16
30,000	London and Westminster	20	6	26½ 26¾ ¼
10,000	National Provincial of England	35	5	36½ 36¾
20,000	National of Ireland.....	22½	5	20½ 21
20,000	Provincial of Ireland	25	5	46
4,000	Ditto New	10	8	16
20,000	Union of Australia	25	6	23½ 24
10,000	Ditto New.....	2½	6	2½ 2¾
60,000	Union of London.....	10	5	12½

TRIAL OF CRAMPTON'S NEW LOCOMOTIVE.—Yesterday, the first trip was made, from Wolverton to London, by Mr. Crampton's new six-wheeled engine, called the *London*. The weight of the engine is 30 tons, and of the tender 20 tons—the weight on the driving-wheels being 12 tons. The tender will contain 2300 gallons of water—sufficient to take a train of 60 tons a distance of 80 miles. The cylinder is 18 in. diameter, with 20 in. stroke; and the diameter of the driving-wheels 8 ft. The top of the boiler is under the level of the wheels, and thus the centre of gravity is kept low. The train, yesterday, consisted of 12 carriages, weighing, in the aggregate, about 60 tons. The working was most satisfactory—the speed varying, between Watford and London, as between 56 and 63 seconds per mile. At this high velocity the motion was perfectly steady. Of course, a further speed may be expected when the working parts of the machinery get into play.—*Rail. Record.*

EXTRAORDINARY BAR OF IRON.—A bar of wrought-iron, 6½ inches diameter, and upwards of 27 feet long, was rolled at the Cyfarthia new rail mill, Merthyr Tydvil, under the immediate superintendence of Robert Thompson Crawshay, Esq., on Tuesday, the 8th inst., weighing 3376 lbs.—by far the largest ever rolled.—*Cambrian.*

ADCOCK'S PATENT SPRAY PUMP.—We have to call the particular attention of all our readers who may be engaged in mineral operations to this most extraordinary invention, first brought into practical use at Mr. Blewitt's extensive collieries under the Llanhiddel Mountain. A first trial of it was made on Tuesday last; and a gentleman who was present informs us that he can find no words to describe its surprising results. It forced (he says) the water out of the pit like a tornado, and he can compare it to nothing but a gigantic water-spout falling upwards. A culvert, 11½ in. wide, by 8½ in. deep, with a rapid fall, was insufficient to discharge the water forced from the pit. We are not able at present to enter into the scientific particulars of the invention; but there can be no doubt that it will greatly facilitate the operations of sinking deep mines; and this is another benefit that we owe to the enterprising sagacity of Mr. Blewitt, our borough Member.—*Monmouthshire Merlin.*

FOOD RIOTS IN CORNWALL.—We are sorry to find, that anything but peace is yet established in Cornwall. Large bodies of men still congregate and threaten violence, and the police and military are kept constantly on the alert. Yesterday week, a most serious riot took place in St. Austell; it was commenced by the miners from the Charlestown Mines, who compelled those from other mines and clay-works to join them, and the most serious disturbances took place; they were, however, at last quelled, and several men taken into custody. At Redruth, Bodmin, and other towns, things are wearing a most threatening aspect.

COPPER ORES

Sampled June 2, and Sold at Andrew's Hotel, Redruth, June 17, 1847.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
Devon Gt. Cons —Wh. Maria	124	£7 1 0	West Caradon ...	28 ..	£12 13 6
ditto	85	8 8 0	Fowey Consols....	113	7 0 6
ditto	81	7 17 0	ditto	105	5 17 6
ditto	70	6 6 6	ditto	71	8 12 6
Wh. Josiah	92	6 8 6	Wh. Friendship ..	128	9 10 6
ditto	82	9 11 6	ditto	116	8 0 6
ditto	69	5 4 6	Marke Valley .. .	82	4 0 6
ditto	60	11 3 6	ditto	29	2 6 6
Wh. Fanny	80	6 7 0	ditto .	22	2 12 6
ditto	77	3 17 0	Bedford United ...	118	5 12 6
West Caradon....	103	6 8 6	Holmbush.....	73	5 2 6
ditto	94	6 15 6	Wh. Busy	32	2 19 0
ditto	66	6 15 0	ditto	12	2 8 0
ditto	45	7 1 0	ditto	11	3 0 0
ditto	30	3 10 6	Tamar Slag	12	7 3 0

TOTAL PRODUCE.

Devon Gt. Cons. —Wh. Maria.	820	£5862 10 6	Wh. Friendship ..	244	£2150 2 0
Wh. Fanny			Marke Valley	133	485 4 6
Wh. Josiah			Bedford United ...	118	663 15 0
West Caradon....	366	2522 0 6	Holmbush	73	374 2 6
Fowey Consols....	289	2023 1 6	Wh. Busy	55	156 4 0
			Tamar Slag	12	85 16 0

Average Standard.....£ 96 16 0 | Average Produce 9¾

Average Price per ton £6 16 0

Quantity of Ore ..... 2110 tons. | Quantity of Fine Copper, 207 tons 10 cwts.

Amount of Money £14,292 16 6

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MERIONETHSHIRE SLATE & SLATE SLAB COMPANY

—Some CARGOES of SLATES and SLABS, from the company's works, have just ARRIVED at the New Commercial Steam Company's Wharf, Rotherhithe; and the directors apprise the trade and the public in general, that they are READY TO SELL, for cash, at the subjoined prices:—

Sizes.				Slate Squared and Planed.			
24 by 14	£12	0	0	3 inch		4d. per foot	
24 by 12	10	10	0	1	"	6d.	" Slabs above 6 feet
22 by 12	9	0	0	1	"	8d.	" long 2d. per ft. extra
22 by 11	8	0	0	14	"	10d.	"
20 by 10	7	6	0	14	"	1s. 0d.	"
18 by 9	4	10	0	14	"	1s. 3d.	"
15 by 8	4	0	0	2	"	1s. 6d.	"

F. HOWARD, Manager pro tem.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

South Wheal Maria.—The letter of Mr. S. Vivian can only appear as an advertisement: we feel that to deviate from such course, would only be productive of a lengthened correspondence, of little general interest.

"R. E." (Cheshire).—We shall be happy to publish regular reports from Wheal Sophia Mine, if furnished with them from the directors, or other authorised persons.

"C. P."—We are not aware when the reprint of Mr. Mansell's pamphlet on the Cost-book System will appear; but we believe that gentleman is still engaged preparing it for publication.

Errata in Mr. D. Mushet's letter in last week's Journal, on Government Interference: *for* "Drs." *read* "D.'s."—allusive to anonymous signatures; also, *for* "ever judges," *read* "severe judges."

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, JUNE 19, 1847.

We have, in another column, adverted to the Cost-book System, as presenting advantages over any other mode of regulating the affairs of a mine—not only from its simplicity, but the security it affords to the mine adventurer. It is hardly necessary, that we should enter upon the subject in detail, yet we cannot allow the important case of "Ricketts and another *v.* Bennett and another" to pass by, without directing the especial attention of our readers to the important point involved in the question at issue. A brief reference to the main features which the case presents will suffice. It appears, that some time since, the purser (Mr. Robinson) of Wheal Providence Mine, opened an account with the Truro Bank, and, from time to time, drew sums amounting to 3668*l.*, which he partly applied to the payment of dividends, when the mine was not paying cost, and a part to his own purposes. The bankers, having applied for the payment of their advances, and not receiving the amount, which, indeed, was not recognised by the adventurers, such being treated as a private transaction between Mr. Robinson and the bankers, the latter finding that their only recourse was to take legal proceedings, and acting on the Cost-book System, endeavoured to obtain payment from one or other of the adventurers, brought an action at *nisi prius* against two of the adventurers, which was tried in August last, at Bodmin, and reported at the time in our columns, when a verdict was given in favour of the defendants—the Judge (Mr. Baron Platt) having decided, that in point of law, the fact of these gentlemen being co-adventurers, did not, of itself, authorise the *borrowing* of money for the purposes of the mine. The Chief Justice, in delivering the judgment of the court, on the 11th inst., fully confirmed the decisions, stating distinctly that the mere fact of a man being a co-adventurer in a mining speculation, was no ground on which his credit could be pledged for money borrowed. He (the learned judge) considered the case before the court distinguishable from other trading concerns; and, indeed, on looking carefully through all the evidence, he could not see how the jury would have been warranted, in coming to any other conclusion than that at which they had arrived.

In our columns of the 15th August last, will be found some stringent remarks on the trial, with a report of the proceedings, which may be perused with advantage by those not fully conversant with the Cost-book System; while, had the court allowed the judgment to be set aside, it would at once have destroyed that security, which we contend the adventurer has under the Cost-book System. The disgraceful conduct pursued on the occasion by the purser, in withholding accounts, rendering false accounts, dividing borrowed moneys as assumed net profits, and, moreover, applying to his own purposes 1000*l.* borrowed, according to the version of the plaintiffs, on the credit of the defendants, will hardly bear reflection. The case may be hard upon Messrs. Ricketts, Enthoven, and Co. (the bankers), but we should have thought more prudence and caution would have been exercised by the resident partner, Mr. E. Turner, M.P., than to have allowed advances to so great an amount to have been made, without any communication with the principals. The lesson will not be soon forgotten; and we gladly record the judgment, as affording an additional evidence of the benefits attendant on the Cost-book System.

¶ In this day's publication we give the concluding portion of the letter of the Liverpool Committee, for the furtherance of the repeal of the duties on foreign copper ore; and as we have hitherto only given portions of Sir Charles Lemon's letter in our general remarks on that document, we shall in our next, as a matter of fairness, publish it entire, when our subscribers will have the two productions constantly at hand for reference. That the arguments urged by Sir Charles in support of the obnoxious duty are singularly weak, and founded on erroneous bases, the most cursory perusal of corresponding portions of the two letters, by persons previously unacquainted with the subject, will be thoroughly convincing. Statistical facts, which in Sir Charles's letter are twisted and contorted to suit the cause he supports, are in the reply placed in a clear and intelligible view; the present position of Chili and America, with regard to the smelting of copper ore, and their future prospects, as to the copper trade, which the protectionists treat with so much indifference, and would make us believe can never injure British commerce, is there shown to be subjects worthy of serious consideration—that Chili has proved herself to be a most important copper-producing country—that it is beyond all doubt, that for ages smelting, more or less rude, has been carried on in that country—that, although partially abandoned when the ores could be more profitably sent to England, the levying a tax on those ores has roused the proprietors to re-establish smelting on the spot—and that, at least, two new ones have been erected on the English principle. In the United States, two smelting-works for copper are in full work—one at Boston, the other at Baltimore—and however Sir Charles Lemon may try to deceive even himself, that the distance of both these works from the coal districts, will prevent the Americans from producing copper sufficiently economical for exportation, it is clearly shown, that they *can* successfully compete with us in the copper markets of the world; and, as the vast deposits of rich ore on the southern shores of Lake Superior are more fully developed, and the present year will, no doubt, witness a great advance in copper mining in that district, smelting-works will naturally spring up in the great coal districts, as the still rapid extension of railway and water communication will enable the ores to be forwarded to any distance for conversion into metal—as much so, or more economical, than they could ship them to England. Smelting works are also in course of erection in countries, where, previous to the duty being imposed, they were never so much as thought of. One in Holland, near Hamburgh, one or two in rapid progress in Sweden, and others in Peru, are being constructed by the French. When these facts are brought before us, and a calm and dispassionate consideration entered into, of the effects which improved modes of smelting, and increasing rapidity of transit, may have upon the British smelter and merchant, we are constrained to come to the conclusion, that the duty has inflicted, and is continuing to inflict, a serious injury on our trade; and that to secure prosperity to the British miner, as well as our copper trade generally, and through that trade the production of a large amount of English manufactures, it is the policy—nay, the absolute duty—of the Government, to take immediate steps for the abolition of the impost—more particularly, as the amount it produces is so trifling, that there can be no excuse for its retention in the shape of injury to the revenue.

The verdict of the jury, at the coroner's inquest on the victims of the unsafe bridge at Chester, has at length been given, which will be found in an ther column. It has not been a hastily considered one, but come to after a patient investigation; and leads to the conclusion, in the minds of matter-of-fact people, that those who have been looked up to as our most eminent engineers, have been all along, since the commencement of the construction of railways, proceeding on erroneous data in the erection of works requiring great strength—and thus not only endangering all who travel by railway, but, on too many occasions, sacrificing human life, to their ignorance, recklessness, and cupidity. That such men as those who gave their evidence that the girder was broken by the engine and tender running off the line, and striking the iron-work and masonry, should support each other, is not to be wondered at—but the public are as able as they are to judge of facts: and there is a host of evidence, of the most conclusive character, both from the opinions of *really eminent* engineers, and from the position of the fallen fragments, that it snapped in the centre from the superincumbent weight—that the girders were not near sufficiently strong for the span, and the brittle material of which they were composed—that the tension rods were of no use, and that, consequently, the fabric was built on most erroneous principles, or rather on no principle at all. Now, as it is in evidence that there are a hundred of like bridges in this country, we shall not be surprised to hear of a repetition of the awful calamity, in case of any additional weight which may travel over them; and we call the attention of future juries to the question, whether a verdict of manslaughter, in case of fatal accident from carlessness in construction, would not bring some of these *eminent* railway constructing gentlemen to their senses, and induce others to be a little more anxious for the safety of the lives of travellers. Government inspection, as at present conducted, is a farce; and the sooner directors treat it as such, and see to the safety of the lines themselves, by employing independent and competent persons to report upon them, the better. Inspectors ought to be placed on every railway during its construction, as suggested in a letter of a "Civil Engineer," in another part of this day's Journal: and, we are glad to find, that the foreman of the jury (Sir E. Walker) directed the attention of the engineers and the jury, at the inquest, to the letter of Mr. Motley, C.E., in last week's Journal, on the subject.

The "Britannia" and "Washington" Steam-Ships.—The *Britannia* arrived at Liverpool, on Sunday last, after a splendid run across the Atlantic, in little more than 12 days, thus beating the *Washington*, with her 2000 tons, and 2000-horse power, by two days, although so much has been said about this gigantic vessel and her performances on the other side the water. The distance from New York to Southampton, the rout of the *Washington*, and that from Boston, with delay at Halifax, to Liverpool, that of the *Britannia*, may be considered the same, and thus no advantage can be claimed for greater distance; the weather also was highly favourable for the former; she took in coal at Southampton, and sailed for Bremen; she is stated to be an ugly vessel, absolutely rolling along the sea, instead of appearing to be making use of her enormous steam-power. The *New York Herald*, a few weeks since, had the following ridiculous puff—what will brother Jonathan say now?—"We have to say, that if the *Britannia* beats the *Washington* over (and they both, we understand, start the same day), she will have to run 'by the deep nines,' and put in more coal. We shall have, in two years' time, a system of Atlantic Gulf, and Pacific steamers in operation, that will tell a brilliant story for the enterprise of brother Jonathan. We are bound to go a-head [illegible] steam is the agent of the age. We expect yet to see the day when a traveller will [illegible] to leave New York, and, going eastward all the time, will be enabled to make the [illegible]t of the earth, coming in by Husacualco, in the summer interval between two sessions of Congress, spending a month or two in the Mediterranean on the way." If such a phenomenon should occur, it must emanate from John Bull! Why the *Britannia* beats the whole of the American merchant steam fleet, and her navy to boot.

Electric Fluid on Railways.—As one of the locomotives attached to the passengers' train was running from Atalanta to Augusta, in Russia, it was recently struck by lightning. The electric fluid passed the mechanism of the engine to the carriages, but did not injure any one. It is the intention of the directors to establish for the future horizontal conductors, which will protect the carriages from lightning.

On the Difference which Exists between Gilding by Mercury and Electro-Gilding.—The author of this paper says, that he has been frequently called upon to solve the following question—viz.: "By what means had a certain article of copper or silver been gilded?" This could not possibly be ascertained with certainty by mere inspection, even by the most experienced eye. M. Barral has, however, discovered a certain means of ascertaining the fact by chemical reaction. He has found that by attacking the articles to be tested with dilute nitric acid, either warm or cold, pellicles of gold are obtained, of the exact form of the article; provided the acid be not allowed to act too energetically. These pellicles are of a yellow gold colour on both sides, when obtained from articles gilt by simple immersion in an alkaline solution of gold, or by means of the galvanic current decomposing certain solutions. On the contrary, the pellicles produced on the surfaces of articles gilt by mercury are of a reddish-brown colour on the side next the surface of the articles gilt. In order to explain this difference in the appearance of the pellicles of gold, M. Barral first had certain articles gilt by the mercury process with certain quantities of gold. The articles thus gilt, on being acted upon by dilute nitric acid, furnished pellicles of gold of a deep brown colour on their inner faces, and heavier than the gold originally employed in the gilding process. The pellicles not dissolved by the acid were therefore not pure gold. They were proved by direct analysis to contain about 3 per cent. of copper or silver, according to which of these two substances the gilt article was formed. M. Barral, therefore, considers it evident that when the amalgam of gold is applied to the surface of an article, a double amalgam of gold and copper or silver is formed. If the article be then submitted to heat, the mercury will be volatilized, and an alloy will be formed, thereby uniting the precious metal and the metal of which the article is formed. If the article gilt be then acted upon by nitric acid, the metal of which it is formed will be completely dissolved, and the acid will act upon the alloy, and carry off the copper or silver near the inner surface, where the gold is in small quantity. But, as the proportion of gold increases near the outer surface, it will preserve the other metal from dissolution, as is well known to be the case with all alloys in which gold predominates. It will, therefore, be understood, that the pellicles detached from articles gilt with mercury must be covered on their inner surface, after being acted on by the nitric acid, with a very thin layer of gold, which gives it a brown colour; this will also explain the reason why nitric acid leaves the gold in an impure state after the destruction of the base metal of the articles. When an article to be tested has been gilt by electro-chemical means, it will be found that the pellicle of gold covers the copper or silver, without amalgamating therewith; and, therefore, the nitric acid will not act upon the layer of gold. The foregoing explanation proves the new methods of gilding to be less solid than the old ones; for it is evident that a layer merely laid on like a coat of paint, cannot adhere so intimately as when the metals are to a certain extent incorporated. Experience has proved, however, that the processes of electro-gilding and gilding by simple immersion possess certain advantages over the old methods. The pellicle obtained from the gilding by mercury, when held up to the light, presents an appearance of being perforated with numerous fine holes; this effect is produced by the passage of the mercury through the gilding when driven off by evaporation. Layers of gold deposited by a battery or by immersion are, however, perfect coatings; and, consequently, for domestic purposes—especially for vessels intended to come in contact with acids—copper articles, gilt by the mercury process, possess disadvantages which are obviated by the new processes.—M. Barral: *Comp. Rend.*

The British Association.—The arrangements for the meeting at Oxford commencing on Wednesday next, the 23d inst., are as follow:—Admission of members and ladies to the public buildings and colleges will be given by tickets to the Bodleian library, between the hours of 9 and 4; the Botanic Gardens, until 8 P.M.; the Ashmolean Museum, from 11 to 4; the Museum of Mineralogy and Geology, from 1 to 4; the Anatomical Museum, Christ Church, from 2 to 5; the Randolph Galleries and collection of Raffaelle and Michael Angelo drawings, from 11 to 4; New College Chapel will be open for service at 8 and 4, and the college, for inspection, between 10 and 12. Most of the other colleges have already intimated their intention of allowing their halls, chapels, &c., to be seen, gratuitously, between the hours of 2 and 4; the university press, from 2 to 4; the Architectural Society's room, Holywell, until 4 P.M. By permission of his Grace the Duke of Marlborough, the house, gardens, and private garden of Blenheim, will be shown to all members and associates daily, at the usual hours, between 11 and 2, and at any hour on Saturday, June 26, by tickets, to be obtained on application to the local treasurer, in person or by letter, at the reception-room, before 10 A.M. daily. By especial permission, the members will be permitted to visit upon Saturday, besides the private garden, the kitchen garden, hot-houses, pineries, &c. For the better accommodation of members, there will be special trains to London on the 24th, 25th, 28th, and 29th inst., at 10½ P.M.

Locomotive Engine Manufactory in Russia.—The Emperor of Russia lately visited the extensive engineering establishment of Messrs. Eastwick and Harrison, the celebrated American engineers, who have established a factory at Alexandroffsky, for the manufacture of engines, tenders, carriages, &c., for the railway from St. Petersburgh to Moscow. His Imperial Majesty was accompanied by his Imperial Highness the Grand Duke Constantine, his Serene Highness the Duke of Leuchtenberg, Field Marshal Prince Paskewitch, the Minister of Marine (M. Menschikoff), the Minister of War (Count Chernichoff), and the Minister of Police (Count Orloff). The Emperor was received at the gate of the establishment, and commenced visiting, in detail, the workshops. He had a full description given him of all the minutiæ in the manufacture of locomotives from the boiler and its dependencies, until the engine was entirely completed, and ready to be placed on the rail. More than 100 locomotives entirely finished, and having every part well polished, were submitted to his Majesty—80 of these were commenced and finished in 1846. At this establishment there are prepared regularly every month all the requisite parts for six engines and tenders. His Majesty also visited the extensive ranges of new workshops, built at some distance from the engine factory, for the construction of carriages, waggons, &c.; the necessary timber for an eight-wheel carriage and five luggage vans is here prepared daily. The day after the visit, the Emperor raised Messrs. Kraft and Melkinoff to the rank of colonel, and gave the order of St. Ann to Major G. W. Whistler, the eminent American engineer; he also made presents of diamond rings of great value to Messrs. Harrison, Eastwick, Ninians, and others. The establishment altogether employs 1920 workmen, of whom 1643 are Russians, 121 Germans, 164 Swedes, 17 English, and 5 Americans. The engineers contracted for 162 locomotives, of 25 tons each, with their tenders, 5300 iron trucks, 2500 eight-wheel luggage vans, 70 passengers' carriages, and 2 peculiarly elegant carriages, 24 metres in length, with 16 wheels each. Of these 108 locomotives, and numerous trucks and carriages, are complete. This establishment is one of the most important in Europe, and highly patronised by the Emperor and nobility.

South Devon Atmospheric Railway.—We understand the directors of this line are pushing on the works as rapidly as possible, in order to open the line to Totnes—the atmospheric principle to be continued to that place when the line is complete, and from thence to Plymouth "is to be worked by locomotive power for some time to come." The action of the valve is still imperfect and uncertain; and while on some sections of the line, at an experimental trial last week, a speed of 60 miles was attained, at others they could realise only 12, and, on one occasion, the train was brought to a stand still. Lord Courtenay and other directors were present, and Mr. Talbot, Q.C., was also present, to be prepared with facts in support of the Great Western schemes. The journey back from Dawlish to Starcross was equally unfortunate, but on to Exeter it again improved. All these mishaps are nothing against the principle of atmospheric propulsion; it is entirely a question of valve, or method of opening and closing the longitudinal orifice for connecting the piston with the leading carriage of a train; while so much uncertainty hangs over Mr. Samuda's plan, it certainly ought not to be carried further. The regular traffic will, however, be carried on to Dawlish forthwith, and, as a few days' actual working will be far better than 50 imperfect experiments, we shall soon be enabled to form an opinion of its success, or otherwise. We much fear the valve, from its uncertainty of being in places effectually sealed, if persevered in, will throw back the adoption of the atmospheric principle; while there are other methods of opening the tube, which may be adopted with complete success.

Silver-Lead Ores.—There has arrived during the last week, in the River Thames, by the *Joseph Carne*, upwards of 100 tons of ore from the Wheal Rose Mine, consigned to Mullins and Co., smelters, London. Also a parcel of rich ore, the produce of the Besore Mine, consigned also to Messrs. Mullins and Co.

The Coal Mines of Nova Scotia.—We have, on former occasions, called attention to the long-pending cause between the Nova Scotia local Government and the General Mining Company, and in February last the question was again brought before the Legislative Assembly. A case had been drawn up for counsel's opinion, and forwarded to R. F. Kindersley, Montague Chambers, and J. Fleming, Esqs., who, in their reply, state, that they consider the Crown does not hold the mines and minerals of the province for the benefit of its subjects there settled; but that they were absolutely vested in the Sovereign, who might dispose of them as he might think fit—that a legal and valid title passed in 1826 to the Duke of York—and that a sufficient title to the mines of Nova Scotia and Capt. Breton is vested in the General Mining Association, for the whole term granted by the Duke of York. After much discussion, a committee was appointed, to examine into the entire merits of the case, and report to the House of Assembly.

The Spanish Quicksilver Contract.—Rothschilds' house has again lost the quicksilver contract, which was bid for at Madrid on the 10th inst. The minimum price fixed by the Government was $86 per quintal, being $4½ above what Rothschild ever gave, and considerably higher than what Senor Salamanca gave five years ago, but afterwards parted with the contract to Messrs. Rothschild, for a "valuable consideration." Whether the present successful contractors, Mr. J. O'Shea and Senor Jorda, of the Fomento Bank, who gave $86 11 reals per quintal, will follow the example of Salamanca, and transfer it to the Rothschilds, remains to be seen. The latter bid only $60 per quintal, for which doubtless there was an object. There were other biddings at $83, $84, and $85; but the increased price caused a good deal of excitement among the company present.

Death of David Mushet.

We have the painful task to record the decease of David Mushet, Esq., F.G.S., M.C.E., &c. &c., at his residence in Monmouth, on the 5th inst., in his 77th year. Nature had been for some time sinking, from the effects of an attack in October last. Mr. Mushet has long earned himself a high reputation as the first manufacturer who gave the subject of iron and steel a practical exposition. Foreign metallurgists, amongst them the celebrated Rinman in the last century, had stated much; but their labours were more the desultry investigations of the general chemist, than the complete examination which establishes a conclusive result. Mr. Mushet commenced about the year 1800 a series of papers in Tilloch's *Philosophical Magazine*, stamped with that utility in character, which can only be attained when science is applied by the practical man to the daily facts before him. These papers were republished, with the addition of valuable notes, especially on the assays of iron ores, in the year 1840, by Mr. Weale, of Holborn. The bulk of Mr. Mushet's researches appear, as is often the case, to have been confined to the early period of his life—those communications being made in the first decade of the present century. The preface of the republication details the usual prejudices and difficulties of an early career. Nearly at the date of his first papers, from an attention directed to the alleged discovery of the French chemists, that steel was produced by the fusion of bar-iron with carbonate of lime, he irrevocably negatived by experiment their conclusions; but made the discovery, which he patented, to manufacture cast-steel, by simply fusing bar-iron with an appropriate dose of carbon, abridging the existing process, in which converted steel was melted for the purpose. On the large scale this patent failed, but from no defect in principle. The economical accident occurred, that the Sheffield steel makers, by the new light Mr. Mushet had afforded them, manufactured cast-steel from the blistered scraps, hitherto wasted, in their extensive operations, regulated as necessary by small portions of charcoal in the fusion. The high price of the best Swedish iron would not permit Mr. M. patent to cope with this application of the refuse steel. About the same era, Mr. Mushet made his great discovery, in Scotland, of the black-band, or "Mushet stone," to which the iron trade of that kingdom is indebted for its prosperity. It might be difficult to name the discovery of a single individual which has produced greater national consequences. A bias of caution appears to have deprived Mr. Mushet of the immense pecuniary advantages he might have secured by appropriating extensive tracts of the mineral, whilst no other party estimated its value. Twenty years elapsed after his first assertion, under much ridicule, of the value of this "wild coal," before its use prevailed. Mr. Bald, the eminent surveyor, the late Mr. Mackintosh, and others, deeply appreciating the weight of benefit Mr. Mushet had conferred on his native country, interested themselves much to prevail on the Scotch iron trade and proprietors to do themselves the honour of publicly acknowledging the sense of their own advantages to this benefactor; but at the lamented decease of Mr. Mackintosh, the acknowledgment seems to have fallen to the ground, and the usual drama is fulfilled, that the inventor labours for others, and reaps no reward.

Amongst many occasions of public advantage to which Mr. Mushet has contributed, we may name the blast furnaces erected at Porto Novo, by the spirited efforts of Mr. Heath, the first ever contemplated in the East Indies; and the iron works at Seraing, in Belgium, at the time of their establishment the part property of the King of Holland, which were erected, in 1825-6, under Mr. Mushet's personal superintendence.

Baron Humboldt.—We regret to learn, that this great naturalist and philosopher is now lying dangerously ill—indeed, his physicians consider his recovery hopeless.

THE "COST-BOOK" PRINCIPLE.

The important decision in the case "Ricketts *v.* Bennett," [illegible] in our columns of last week, has created considerable sensation, from the judgment given; which, it will be seen, has established no[illegible] Cost-book System in its purity, but given a degree of [illegible] embarked in mining enterprise, where such princi[illegible] The present moment would, therefore, appear to [illegible] offering some few remarks, and illustrating, by [illegible] the nature of the Cost-book System, as we und[illegible] while the information conveyed may guide those who are [illegible] conversant with its principles, or those details, which form its peculia[illegible] plication of which are of so essential a benefit [illegible] in affording him every protection.

The "Cost-book Principle" may be said to have [illegible]inated when tin was the only metal known or worked in the [illegible] Cornwall and Devon, and was adopted by the tinners (or l[illegible] in tin mines), who, unable to keep their own accounts, [illegible] for such purpose, and by them denominated a "purser," [illegible]was who kept their accounts in what was denominated or known [illegible] cost-book," advanced them from time to time such moneys as they required, and who balanced up their accounts, and divided any profits which might have arisen at the end of every two months. In the end other parties, besides the tinners or labourers, embarked in the pursuit of mining, who were termed adventurers, or shareholders, and the purser acting as agent for both parties paid the dues, or royalty, to the "lord," or owner of the soil, dividing the profits between the adventurers and labourers, according to their respective shares therein, or settling the respective proportions to be paid by the parties to meet the current monthly cost. This led to the establishment of a court, by custom called the "Stannary Court," held every two months, for auditing the purser's accounts, and settling any disputes that might occur between any of the parties connected with the mines, over which the *Prince of Wales*, as Lord-Warden, presided; but this court extended no further than *tin* mines—and as copper mines became of consequence, and silver-lead mines were also discovered, it became necessary to extend the authority of the court to those mines also, and, about the year 1834, an Act of Parliament was passed for the purpose of carrying out the rules of the Stannary Court, and courts of law and equity were established under the jurisdiction of a Judge, called the "Vice-Warden," the Prince of Wales being the "Lord-Warden," to whom an appeal could be made from the Vice-Warden's Court.

In 1844, an Act (7 and 8 Vic., cap. 110) was passed "For the Registration, Incorporation, and Regulation of Joint-Stock Companies," the 63d section of which runs thus:—"Provided always, and be it enacted, that nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of *mines, minerals, and quarries*, of what nature soever, on the principle commonly called the *Cost-book Principle*." This extended the Cost-book Principle, as has been decided by the "registrar," under this Act to all parts of the United Kingdom, and the following may be taken as the leading features of this principle—that certain parties, called shareholders, or adventurers, agree to work a piece of mineral ground, of which a lease has been granted (usually for 21 years), called a "sett," and an entry is made in the cost-book as follows:—

"WHEAL A B.

"We, the undersigned, do hereby consent and agree to become shareholders and co-adventurers in a certain mine, held under lease from C D, and situate in the parish of E F, in the county of G, to be called, or known, by the name of 'Wheal A B,' in the several shares and proportions set against our respective names, the entirety of the said mine being divided into shares, and be conducted, managed, and worked in all respects on the Cost-book Principle; that Mr. be the purser, and that this be the cost-book of the said mine. Dated the day of 184 ."

In this "cost-book" the whole accounts of the mine must be entered, and at the first meeting of shareholders, to be called by the purser, bankers are named, into whose hands the first deposit is paid, as a capital for working the mine, either to the credit of the purser, or in the names of a "finance committee," chosen at such meeting from the body of shareholders, and elected until the next two-monthly meeting, or until another committee may be chosen. The purser, in such case, would, therefore, become a nominal party, and be under the control of such finance committee from two months to two months, the shareholders at their two-monthly meeting being the sole directors of the mining company, and voting on all subjects according to the number of shares they respectively hold, either in person or by proxy; and, should the working capital first raised be expended before any ores can be sold, the shareholders, at such two-monthly meetings, raise a further capital by making a call of such sum per share as they may think proper—the accounts being audited at every such meeting, and dividends made, or otherwise, and copies of such accounts sent to every shareholder. At the first meeting it is also agreed what number of shares may be necessary to form a requisition to the purser, for calling a special meeting of the shareholders, should it be thought necessary. In case of any shareholder disposing of all, or any part, of his shares, he signs a notice to the purser, that he has sold such shares to A. B., of , and who, accordingly, signs such notice, accepting of such shares upon the same terms as the seller held the same. The purser then enters the name of the purchaser in the cost-book, for the given number of shares so transferred, and certifies the same to the purchaser by letter, or certificate, and the liability of the seller on these shares at once ceases entirely, if all the shares be transferred, or, if otherwise, then in part. It has been decided that the transfer requires no stamp, the purser, therefore, supplies the shareholders with the form of transfer; and in case any shareholder shall become dissatisfied with the mine or its management, he may, at the end of any month, give the purser notice of abandonment of the shares held by him, and the purser will then have the materials and ores on the mine valued; and, after taking into account the moneys in the banker's hands, he will pay over to such shareholder his portion of such materials and money, according to the number of shares he may hold. The purser, previously to the two monthly meeting, makes a correct list of shareholders in the cost-book, which varies from one meeting to another, according to the sales effected.

In the case of Reynolds *v.* Bassett, on an appeal from the Vice-Warden to the Lord Warden (Prince Albert acting as trustee for the Prince of Wales), heard on Saturday, the 29th May, 1847, the Lord Chancellor, Lord Lyndhurst, and other judges being present as the advisers of the Lord Warden, the following important decision took place:—"that no transfer can be legal unless the same be registered in the cost-book; and that the entry in the cost-book constitutes a complete transfer"—thus affirming the judgment of the Vice-Warden.

In another mining case, Ricketts and others *v.* Bennett and another, argued before the Lord Chief Justice of the Court of Common Pleas, on 11th June, 1847, upon a motion for a new trial, his lordship decided, "that the Cost-book Principle was distinguishable from other trading concerns or partnerships—so that no shareholder could pledge the credit of another shareholder" for moneys or materials, although they may be actually expended or used for the benefit of the mine—thus clearly showing the law and custom of the "Cost-book Principle' to be, that there are no liabilities beyond the amount of the shares respectively held by each shareholder up to the time of transfer; while the moment he transfers his shares, his liabilities cease—that this principle gives to each shareholder a vote in the direction of the affairs of the company (the sole management being in the shareholders) at each of their two-monthly meetings—and that the shareholders are not at all subject to the laws of common partnerships or the Joint-Stock Companies' Act.

We consider that we have sufficiently pointed out the advantages attendant on the application of the Cost-book System; and need hardly observe, that the Joint-Stock Companies Act, which is most imperfect in itself, need not be resorted to, while the mine adventurer is thus protected, and, at the same time, has a controlling power vested in him. That there are many mines worked, assuming them to be conducted on the Cost-book System, which, however, vary much from the principle, is, we believe, generally admitted; and we would counsel the parties to adhere strictly to the forms adopted in the county, or they may subject themselves to penalties, and, at the same time, render their proceedings irregular, and, consequently, not binding on their co-adventurers.

COPPER MINING IN AMERICA.—The copper mining fever (says the *Trenton Emporium*) appears to have increased very considerably in and about our state for a few months past. The Flemington Mines are doing wonders, and employ a large number of workmen; the company appear to be making money. Several hundred tons of copper ore have been mined and forwarded to market, and the prospects of the company are first-rate. We hear of another mine called the Allegheny Mine; the ore is spoken of as exceedingly rich, and easy of access. We also see that certain copper mines in Pennington begin to attract attention. Mr. Davie, a Cornish miner, has been making an examination of the district supposed to be rich in minerals, and has made a most favourable report.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Royal ordinances, inserted in the *Moniteur*, sanction the constitution into what are called *sociétés anonymes* of the Company of the Houillères of Layon and Loire, and of the Company of the Fonderie de Niort.

A general meeting of the shareholders of the Coal-Pits and Iron-Works of Pouquies, will be held on the 28th of June.

The Northern Railway Company has just entered into in a treaty with an iron establishment of the department du Nord for the supply of 10,000 tons of rails at 310 fr. (12*l.* 8s.) per ton. This price is moderate for France, compared with the contracts at 14*l.* 10s. per ton, and upwards, which some unfortunate railway companies were compelled to enter into a few months ago. I cannot exactly understand what can have induced our ironmasters to have accepted it; for they have just as much reason to ask between 14*l.* and 15*l.* a ton for their rails now as they had then. In fact, if they were warranted in demanding such a price a few months back, they would be warranted in demanding 2*l.* or 3*l.* additional now; for the necessity of meeting the demand for iron is just as great as ever it was, and the means of meeting it as small. But, perhaps, the present moderation of the ironmasters is dictated to them by the necessity of being on their best behaviour until the new Customs Bill shall be disposed of by the Chamber of Deputies. They, no doubt, feel that, if they were to fleece the companies too much just now, they would have every inducement to make such an outcry as should compel the Chamber to make some concessions to railways, as well as to the shipping interest, by the bill now pending before one of its committees. Their prudence shows that they are wise in their generation; and it, at the same time, proves that they are aware that their monopoly is so scandalously unjust as to be totally indefensible.

The *Journal des Chemins de Fer* takes the same ground as the *Mining Journal*, with respect to the threatened imposition of an excessive duty on English copper, in order to compel France to seek copper ore in South America, and thereby encourage the shipping interest. Your contemporary, like the *Mining Journal*, contends that such a measure would be unjust in principle—inasmuch as it would be taxing the many for the benefit of the few; and it asserts that it is absurd to talk of anything of the kind, inasmuch as France has not the means of smelting the ore—having no establishments, no furnaces, no workmen. Even (it adds) if she had all that, she would never be able to smelt ore so cheap as the English establishments. In all these assertions, your contemporary is strictly correct. Indeed, I remember reading in the *Mining Journal*, a few weeks ago, an article on the question, relative to the copper duties, in which it was stated, that attempts had been made, some years ago, to set up smelting establishments in France to compete against those of England; but without success. What has once been, would be again, should the attempt be seriously repeated.

It is a little singular that, at the very moment at which an abolition of the duties on the importation of foreign copper ore is loudly demanded in England, a heavy duty should be proposed on the copper of England coming to France. The *Journal des Chemins de Fer* points out the contradiction; and, in so doing, quotes the remarkable leading article which appeared in the last Number but one of the *Mining Journal*, in which you declared for the abolition, notwithstanding your previous advocacy of the opposite principle.

The *Moniteur Industriel*, which passes for the special organ of the ironmasters, has not ventured to say anything in favour of this stupid project of the exclusion of English copper. Is it because it finds it too sweeping, too absurd, too unjust, even for thorough-faced Protectionists? If so, I congratulate it on its discernment; but it ought, in justice to itself, to make known its opinion.

The weekly letter from St. Dizier of the 10th, is as follows:—"Paris proposes some important purchases of *fers laminés*, which will probably be concluded at 380 fr., delivered at St. Dizier. The provinces only demand assortments in small quantities, which are quoted at 385 fr., with 25 fr. for classification. *Fers battus* are not demanded—they are still quoted at 385 fr.; only about one-third of the furnaces are in activity. There are no transactions in *fontes blanches*; the result of the fair at Chalons sur Saone is waited for. *Fils de fer* are little but demanded; and are at from 5 fr. to 10 fr., according to the new tariff."

The Chamber of Deputies is now discussing a proposition for the reduction of the duty on salt.

The *Journal des Chemins de Fer* speaks favourably of a company which has just been formed, under the name of "*Compagnie des Locomotives Perfectionnées*," for the purpose of studying, constructing, and experimenting new inventions connected with locomotives. The utility of such a company is unquestionable; for everybody knows that a great many seemingly valuable inventions are lost from the inability of the inventors to obtain the necessary funds for working a practical experiment. If, then, the company tries fairly all such inventions as are offered to it—such, that is as are not manifestly extravagant—it will, no doubt, be productive of great good to railways, to shareholders, to the public, to science, and to inventors; and the *Journal des Chemins de Fer* seems to think that its success, as a mercantile speculation, will be very great; for it says, in France, 3000 locomotives will be required in the next 10 years, and, after the 10 years, about as many more will be needed. But, perhaps, the company's most likely chance of success would be, in getting possession of some valuable invention, which would either reduce the present expense of building locomotives, or add to their power. The company is to commence its operations by the trial of an invention by Dr. Guyot, which consists of a locomotive of three pistons, acting on the same axle, and worked by three cylinders, each receiving a distinct and separate supply of steam—so that the locomotive can be worked with one, two, or three pistons, according to the weight of the train. It is asserted, that this invention will enable an economy of 20 per cent. in the consumption of steam to be effected, and of from 20 to 50 per cent. additional power to be obtained. The capital of the company is fixed at 1,000,000 fr. (40,000*l.*), in shares of 500 fr.

A copy of the petition of the merchants of Rouen, praying that the duty on the importation of foreign coal shall be the same all over the kingdom, is now before me—the subject matter of the petition was alluded to in one of my recent letters. The petitioners ask these very reasonable questions: "Why should the coal of Saarbruck pay a less duty than that of Mons? Why should the coal of Mons pay a less duty than that of Newcastle? Why should the coal of Newcastle pay a heavier duty at Dunkirk, at Rouen, or at Nantes, than at Sables d'Olonne, at La Rochelle, or at Bourdeaux?" He would be a knowing man who could find a satisfactory answer to such simple questions—in truth, to the *why*, no power on earth could give a reasonable *because*. The petitioners themselves say this:—"It is impossible (they observe) to find any reason—even a specious one—in favour of the differential tariff on this article." And they add—"that it is a violation of the fundamental principle of our legislation, that all Frenchmen are equal before the law!" They then continue—"This differential tax for all points of the coast, has a character essentially and purely fiscal; for, in spite of the increase of price which it occasions, it is notorious, that no parcel of French or Belgian coal can be sold when put in competition with English coal." That fact is certainly remarkable. "At Rouen (continue the petitioners), we only receive a very small number of boats freighted with coal from Mons, Charleroy, or Fresnes; and that coal is of a peculiar quality for certain trades. *Almost the whole of our supplies come from England.* It is, therefore, clear that, without having even the pretext of protection accorded to a branch of French industry, the Government levies on all the consumers of coal on the coast, a higher duty than on those of the frontiers of the north and of the east. Is that justice? Is it equality?" The petition then goes on to say, that these differential duties are still more unjust from the fact, that the south, which pays a less duty than the north, pays also less for freight of the coal; and this it explains in this way:—"The vessels which convey coal from England to La Rochelle, or Bordeaux, are certain to find a freight to return with, either in brandies or wines; they can, consequently, carry their coal at a lower price, on account of the voyages, both to the destination and back, being equally productive. But it is only by chance that vessels coming to Rouen, obtain a return freight; most frequently they return empty. They must then put their freight of coals to Rouen, at such a price as shall compensate them for having to return to Newcastle without a cargo—and thus it is that freights of coal is higher to Rouen than to Bordeaux, although the former is much nearer. These reasons certainly are amply sufficient to induce the Chamber to abolish the stupid conditions of the French tariff (which, by the way, is the most stupid tariff in the universe), with respect to English and Belgian coal. But will the reasons have any weight with such an *enlightened* body as the present French Chamber? For my part, I doubt it. What, in truth, can one expect from an assembly which keeps up the iron duties? What can one think of a Legislature of which a committee proposes to exclude English copper to benefit French shipping?

The Madrid journals, which arrived this morning, bring an account of the leasing of the quicksilver of the celebrated mines of Almaden. This took place on the 10th, in the presence of several of the Ministers. The Bank del Fomento made the most favourable offer, and obtained the concession, at the rate of 86 *pesos* per *quintal*. There were six or seven competitors, among them Messrs. de Rothschild. Your readers are aware, that the possessors of the quicksilver mines of Almaden have almost a monopoly of quicksilver, and are able to exercise great influence over the production of silver in Mexico.—*Paris, Wednesday.*

BELGIUM.—The shareholders of the Company Valentine Coq (zinc and coal pits) agreed, at their recent meeting, to declare that 5 fr. 50 c. per share should be paid forthwith, as the first instalment of the dividend for 1846. The money may be received, either at the offices of the company in Belgium, or at those of the Vieille Montagne Company, at Paris. The Valentine Coq Company, your readers will remember, was got up by the directors of the Vieille Montagne, and his shares were awarded to the shareholders of that company in preference to other persons.

The shareholders of the iron works of Ougreé will hold a general meeting on 28th June.—*Brussels, Tuesday.*

ON THE MANUFACTURE OF GAS.

The great and growing importance of the adoption of the most economical and perfect methods of distilling coal for the production of carburetted hydrogen for artificial illumination, induces us to give the following general view of a paper on that subject, read at the Western Literary and Scientific Institution, Leicester-square, although but a few months since we gave at considerable length the very able lectures delivered by Mr. T. A. Hedley, at the Devonport Mechanics' Institution.

In 1739 appeared the first account of attempts to distill coals in close vessels or retorts, and collect the products of gas in bladders for experiments; and which experiments were frequently made and continued up to 1792, a period of upwards of 50 years, during which time, although the practicability of easily procuring a cheap and beautiful artificial light by the distillation of coals had been so repeatedly; manifested still the tardy nature of men's minds, and the total absence of disposition for improvement, prevented any steps being taken for the introduction of so valuable a discovery.

In 1792, Mr. Murdoch, a talented engineer of the time, residing at Redruth in Cornwall, where he was employed in introducing the then newly invented steam-engine of the celebrated James Watt, for draining the deep mines of that county, constructed an experimental coal-gas apparatus, and lighted his dwelling. After this he removed to Soho, near Birmingham, to the steam-engine factory of Bolton and Watt, where he lighted their manufactory, and other places. The plan adopted at this period was of the most primitive kind, being merely a close cast-iron vessel fixed in a furnace, in which, on its being partially filled with coal, and made red hot, the gas was generated, and conveyed away in pipes in its crude and impure state to the burners. In the introduction of such a valuable discovery, this state of things could not long remain; the shopkeepers soon discovered the injurious effects of sulphuretted hydrogen on their goods, whilst the air of rooms became so contaminated by sulphur and carbonic acid, as to be extremely unwholesome, and depressing to animal life. Lime was found to be a complete, convenient and cheap material to remedy the evil, for the discovery of which there are several claimants. It was at first mixed with the water contained in the tank of the gas holder; the gas being delivered by a pipe a little below the surface, it rose in bubbles through the lime-water, and as a stronger affinity exists between the impure gases and lime than for carburetted hydrogen, this gas only was set free, and escaped above the water ready for use. This plan was soon found very inconvenient, from the difficulty of removal when saturated; the separate lime-vessels remedied the defect, which, with the hydraulic main, are said to owe the honour of their invention to the fertile genius of Mr. S. Clegg, the former in 1805, and the latter in 1809. About this time gas lights were exhibited in London by Mr. Winsor; and by 1849, 288 miles of gas pipes had been laid in the streets of London. In the construction of apparatus for the production of gas, there is first the distillatory process in cast-iron retorts; secondly, the refrigeratory, or cooling, process, which partly takes place in the hydraulic main, and finally in the condenser; and, thirdly, the purifying process, in which the impure gas, as it escapes from the condensers, is rendered fit for consumption.

In no part of the gas apparatus has there been greater ingenuity displayed than in the retorts; and, indeed, as they form the principal item of expense in wear and tear of a gas station, it is of the highest importance to ascertain the kind and form which shall produce the greatest bulk of good illuminating gas from a definite weight of coals, and that they shal be as durable as possible, at the least cost—cast-iron ones seldom lasting more than from nine to twelve months, when they become old iron of the most valueless description. Cast-iron is almost universally used, the dimensions being from 6 to 7 ft. long, 1 to 2 ft. wide, 9 to 18 in. high, from 1¼ to 1½ in. thick, and weighing from 10 to 15 cwts. The forms are various—square, round, oval, flat D, high D, kidney-shaped, &c.—but the D shape is found the prevailing form. At the old company's works at Liverpool, wrought-iron retorts have been used for many years, the sides and top being made of iron plates, rivetted to a cast-iron bottom—length 6 to 8 ft., and width about 4 ft.; and it is stated that they were found more efficient and economical than cast-iron ones. At Glasgow, Paisley, and many places in the north of England, retorts are made of fire-clay, generally of larger dimensions than those of cast-iron, the form being D shaped, and from 3 or 4 to 5 in. thick. The manner of setting iron retorts is as much varied as their forms. In small towns, requiring but a limited supply of gas, they are set singly; but when a greater supply is necessary, they are set two or three in one fire; and in the largest establishments, the furnaces are of such various dimensions, as to contain from three to even nine retorts.

With respect to the production of gas, as to quantity and quality, there is as great a variety as there is in the coals from which it is obtained—some Scotch coals producing as much as 10,000 cubic feet per ton, which would fill a room 100 ft. long, 10 ft. high, and 10 ft. wide. English coals do not produce so much, but may probably be taken on an average at about 8000 cubic feet per ton; and as the greatest portion of the gas is given out in the early part of the distillation, it follows that it must pass rapidly from the hydraulic main; yet, however short the time may be, a large quantity of tar and ammonia is reduced from the gaseous to the fluid state in that vessel, and runs off in the lower part of the main to the tar cistern.

The duration of the process of distillation depends on the quantity of coals in the retorts. Gas managers entertain various opinions on this head, although it is agreed that thin strata and quick distillation produces the greatest quantity of rich gas. When the charge is fully carbonized, the doors are taken off, and the red hot coke drawn out by rakes. As soon as possible after drawing, the retorts are charged again, to prevent any loss of heat by their being left unnecessarily open.

The next portion of the apparatus for consideration, is that of condensation. In all well arranged works there is what is called a refrigerator, or condenser, which consists of a considerable length of pipe, through which the gas has to pass, surrounded on the outside with cold water, for the purpose of extracting as much as possible of the heat from the gas. The last process to complete the manufacture of gas for the consumer is that of purification, by which the remaining gaseous impurities which have escaped the condensers, not being condensible, have to be removed by chemical action. For this purpose two methods are in use, one being that of passing the gas through lime-water—being a mixture of one part slaked lime to 20 or 30 parts of water, being of a consistency very similar to plasterers' lime-wash. The other is that called the dry process, in which the lime is slaked, allowed to cool, and as much water added as to cause it to feel damp, and to retain its shape on being squeezed in the hand, similar to garden mould, or brown sugar. In each of these plans the gas is passed through successive vessels, until it is thoroughly purified from the sulphur and ammonia with which it is contaminated. The weight of the gas-holder is generally such as to produce a density, or pressure, on the gas of about 2 ozs. per square inch, producing an upward pressure on the cover of the purifier of 18 lbs. per square foot, and which is, consequently, held down by suitable fastenings to the body of the box.

As obstructions occasionally occur in the condenser or other pipes, between the purifiers and the retorts, by the deposition of napthaline tar, &c., all well arranged works should be furnished with a self-acting escape for the gas, which is being continually generated by the retorts, placed in some conspicuous situation, so that it may be instantly seen when such a contingency takes place. All that is required for this purpose, is an upward opening in the pipe at the end of the hydraulic main, with a water-joint to receive a cylindrical cover, like an inverted cup, dipping into the water-joint, and fastened down. Of course, the depth of this cup, or the altitude of the water, must be more than equal to the resistance arising from all sources, such as the friction of the gas through the condensers, the altitude of water resistance in the wash vessel, the purifiers, and gas-holder.

The gas-holder, being merely a vessel of large capacity for containing the gas as purified, is of a most simple kind, not susceptible of much variety, the form first used being still continued, consisting of two parts. The first consists of a circular vessel, or tank, in the ground, with upright sides of brick, or stone, and rendered water-tight by being plastered all round with plastic clay; the pipe conveying the gas from the purifiers is carried down a dry well, rather below the level of the bottom of the tank; at the lowest extremity of the pipe in the well, there is a small close vessel for receiving the liquid ammonia which becomes condensed, and in which is inserted a hand-pump, to draw it off. The inlet pipe is continued under the wall of the tank, and carried upwards to a few inches above the water level. The gas-holder is a sheet-iron cylinder, open at bottom and closed at top, about a foot less in diameter than the tank; it is made of iron, about 1-16th of an inch in thickness, the top being rather stouter, and supported by rafters, suspension truss-rods, &c., and is kept upright in rising by rollers and guide wheels. The great increase in the demand for gas has correspondingly increased the size of the gas-holder; for whereas 50 ft. diameter was 20 years since considered excessive, they are now made upwards of 100 ft., and of corresponding height. To save the covering so large a superficial quantity of ground, the telescopic gas-holder was invented. This will contain two, three, or four times the cubic contents of the tank, according to the number of slides, and each of them is rendered gas-proof at the edges by having a trough, all round which fills with water when down in the tank, and into which a flange on the top of the next dips, thus making a water seal. It has been observed, that the weight of the gas-holder compresses the gas to a density equal to an altitude of three or four inches of water, but this must be varied to suit the conditions of the district, the distance between the stations of manufacture and consumption, &c. In addition to this, the immense quantity necessary to be sent out in the beginning of a dark winter evening, when almost every light is in full blaze, requires very nice management so to proportion the pressure, that every one may have fair and ample quantity. This was at first done by a common valve, regulated by hand, but it soon became apparent that better contrivance was necessary. The gas-governor was, therefore, invented. This apparatus is fixed at the gas station, between the gas-holder and the mains; though not quite self-acting, it is perhaps as nearly so as possible, to meet the varying circumstances of demand. It consists of a small gas-holder, tailpieced by a number of shifting weights, by which its specific gravity, when more or less immersed in the water, regulates the supply to the demand, under whatever pressure it is adjusted. The gas enters through a centre pipe, in which there is an iron cone suspended; the top has a plate, with a hole nearly circular, to fit the base of the cone. It is, therefore, clear that if this cone is drawn up close, no gas can escape—but if, on the contrary, quite down, a full flow will take place. The superintendent, therefore, in the beginning of the evening takes off as many weights as will adjust the annular orifice between the cone and the cap-plate, to produce the pressure required, which is indicated by a gauge in the top of the vessel. The gas in this governor is, of course, under the constant pressure of the main gas-holder.

The last portion of this subject, which interests the public, is the meter, which as we have so often treated on before, and as an article on the subject will be found in another column, we must here close these remarks.

Original Correspondence.

THE DUTIES ON COPPER ORES.

SIR,—I endeavoured, in a former letter, to show that these duties would soon follow the fate of the majority of the so-called protecting duties. At the same time, it is deeply to be regretted that little or nothing has been done in Cornwall to meet the formidable competition of the colonist and the foreigner. *There* it is greatly to be feared that the inhabitants will soon be as much paralysed as the poor Irish have recently been by the failure of their potato crop; and it might be proved, that nothing could be more injurious to the best interests of Cornwall, than the early abolition of M. Taix's famous sulphur monopoly. It was indeed destroyed too soon; for, with the abolition of that monopoly, there has been a cessation of the attempts to dispense completely with foreign sulphur. If it had continued in force till now, there is every reason to believe that the smelting of the Cornish copper ores would have been vastly improved, and not a tithe of the sulphur required that we are even now obliged to import from foreign countries. But a greater enemy than the chemical manufacturers then experienced the Cornish miners will now find, from a cause diametrically opposite—competition. Fortunately, however, the smelting of the Cornish ores is susceptible of great improvement; and the most obvious improvement can never be of any value in a newly or thinly-populated country. Of the 23 per cent. of sulphur that these ores generally contain, a portion in some localities might be saved as vitriol, without the aid of coal, and the roasted ores would become 12 per cent. lighter. After being roasted, the ores might then be shipped to Swansea to be reduced. Thus, in ores rich in sulphur, they might be more valuable than they are now by 12s. per ton for the sulphur; 6s. for the saving of a ton and a half of coal at Swansea, and 6d. less freight, equal to 18s. 6d., which alone is nearly double the amount of the highest protecting duty.

Before concluding, it must be admitted, that the Chilians have some reason to complain of the duty upon their ores, as compared with the colonist. In our late tariff, the protection afforded to the latter generally, when any duty was not repealed, was 200 per cent.; but, in respect to copper ores, the advantages which he possesses is no less than 600 per cent. The duty on Chilian copper in ore, above 20 per cent., being 6*l.* 6s.; on colonial, only 1*l.* 1s. per ton. The apparent protection to the Cornish miner upon the average of his own ores of 8 per cent., is, therefore, 10s. against the foreigner, and 1s. 8d. against the colonist.

Now, as the Chilians have to contend with a duty of 6*l.* 6s. per ton on copper in ore, and freight equal to 21*l.*, it is self-evident that they will prefer to smelt all their own copper ore. The duty on copper in ore from a British colony is too small to be of much consequence to the importer; and he can, doubtless, although he be more distant, import a large portion of his ores at a merely nominal freight—they being necessary as ballast to the wool ships. I see, by your Journal, that there will be a sale at Swansea in a few days of 632 tons of copper ore from the Burra Burra Mines, which, at one sale alone, is about two-thirds of the entire amount that was sold last year. The colonial ores will, therefore, as I have said before, soon effect a complete abolition of the duties. W. BIRKMYRE.

June 17.

THE TON MAWR COLLIERIES AND RAILWAY, NEAR NEATH, SOUTH WALES.

SIR,—From a paragraph in your Journal, it appears that a Joint-Stock Company is being formed to purchase and work these collieries—"It is proposed to raise a capital of 120,000*l.*, in 6000 shares, of 20*l.* each, on which instalments, to the amount of 10*l.* 10s. per share, are to be called, extending over a period of five years—45,000*l.* being paid by five equal instalments, as the purchase-money of the property." It appears, therefore, that whilst the nominal capital of the company is to be 120,000*l.*, only 63,000*l.* is to be paid during the first five years, and, out of this sum, 45,000*l.* is to be paid for the property; "whilst it is contemplated that a floating capital of 5000*l.* will be ample for the purposes of prosecuting the collieries." We are also told, that "the estimate of the profits range from 4500*l.* to 9000*l.* per annum; and it is assumed that the result of the first year's operations will yield a dividend of 15 to 20 per cent. on the amount paid as a deposit, or first call of 2*l.* 10s. per share." Now, Sir, this financial arrangement looks as if the projectors of this company had not much confidence in their own estimates; for if 50,000*l.* be sufficient for the purposes of purchase-money and "floating capital," why is it proposed to raise 63,000*l.* in the first five years, and, ultimately, 120,000*l.*, in a concern which is to pay 15 or 20 per cent. the first year, and afterwards to realise a profit "ranging from 4500*l.* to 9000*l.* per annum?" The history of these works is confirmatory of the doubts which have been suggested by these estimates. It is well known in this neighbourhood, that these collieries were opened, and the railway constructed, by two gentlemen from London seven or eight years ago, and the result of their adventure is told by the *Cambrian* newspaper of the 8th February, 1845, as follows:—

"COURT OF BANKRUPTCY, BRISTOL: *before Mr. Commissioner Stephen—Re Strange and Parsons, Baglan—Last Examination.*—Mr. Green, of London, attended as solicitor for the flat. In this extensive estate a sum of about 40,000*l.* had been sunk in boring for coal, with little or no success, besides which, it was said 60,000*l.* had been invested in railways. His Honour, in looking through the balance-sheet, noticed an entry of 25,913*l.* due to Mr. Sturge, which Mr. Green explained to be 24,713*l.* advanced by Mr. Sturge for the collieries, and a further sum of 1200*l.* which that gentleman had very handsomely advanced in order that some other creditors might not suffer."

There is some obscurity in the above extract, which may, however, easily be cleared up, by observing that the loss of 40,000*l.*, which it is stated "had been sunk in boring for coals, with little or no success," was not owing to coal not being found, but to the loss sustained in working the collieries, four of which had been for some time in extensive operation. There is, unfortunately, no doubt but that, at least, 100,000*l.* was actually expended, in forming and carrying on these works, and in the purchase of a small mountain estate, and that 26,000*l.* was the amount paid by Mr. Sturge for the whole concern—thus leaving a clear loss of 74,000*l.* to the original adventurers. The first sale of this property took place in 1843, and, notwithstanding the diminished capital invested in it, the concern was again sold or transferred in the following year, to the present proprietors; in the meantime, the works have been unremittingly carried on, and considerable quantities of the coal have been extracted—notwithstanding this, and the depreciation consequent upon the wear and tear of machinery, trams, railway, &c., for nearly four years, it is now proposed to obtain 45,000*l.*, for what was bought for 26,000*l.* in 1843!

In the paragraph before mentioned, it is also stated that 70,000*l.* was "outlaid on the railway alone, which is 7½ miles in length." This is an error. In the Court of Bankruptcy, Mr. Green is reported to have said that it cost 60,000*l.* We believe both estimates to be very considerably beyond its real cost. It is only a single line of *three feet gauge*, with occasional sidings, and with three rails on the steepest inclines, and is laid with very light rails. There are no tunnels, or very heavy earthworks. There is only one stationary engine; and it, as well as the machinery for working the self-acting inclines, and the masonry on the whole line, are of the plainest and most inexpensive description. With the exception of a very short distance of its entire length, it passes over mountain land of very little value. Instead of its being 7½ miles long, the distance traversed by it from Aberdulais to Blaen Gregan, its two termini, is only six miles and five furlongs. The whole railway has been made and finished in a very rough manner; and, even with the most careless and lavish expenditure, could certainly never have cost anything like 70,000*l.* or 10,566*l.* per mile. Fearful of trespassing too much on your space in this letter, I reserve further observations on these works for a future communication, in which, with your permission, I purpose to resume the subject, and to show the present state of the collieries and the mode of working this extraordinary railway.—OBSERVER: *Neath, June* 14.

THE STANDARD.

SIR,—"A South Australian Miner," in your Journal of the 7th Feb., is perplexed with the question, what is the meaning of the term "standard?"—and Mr. Budge, in yours of the 20th March, has attempted an answer; but, I have no doubt, the querest is as much in the dark as ever, unless he has found some other solution of the question. Having been involved in the same perplexity I venture an explanation, which I hope may prove intelligible. It is singular the question should continue to be asked in England, and still more so, that I have never yet seen an intelligent answer in the *Mining Journal*, nor heard one from any Cornishman of whom I have inquired. "Standard," like our American denomination of the 1*l.* as $4·44, is a mere fiction. It is not "the value of a ton of copper," though it has a confused reference to a ton of copper, as $4·44 has to a 1*l.*, in our calculation of exchanges. Standard is an *index merely*, which indicates the advance and decline of the price of copper ore, and the consequent profits of mining, as the rates of premium on bills of exchange, from 5 to 10 per cent., indicate the advance and decline of exchange between us and England. Now, Sir, by noting the operations of the inquirer we detect the difficulty; he is told, that "standard is the value of a ton of copper," The querist remarks—"There is not much difference in the value of fine copper, whether produced from rich ore, or from poor;" but finding the standard of various parcels so very different—(say in one parcel 89, and in another 124, in the same day's sale)—he is sure there cannot be the difference of 35*l.* in the value of different tons of copper, and is bewildered. To this Mr. Budge replies, by a jumble of ideas about "fixed standard" and "fixed produce," which no one not initiated can understand, and which I doubt if Mr. B. understands, since the reason given in his last paragraph is obviously erroneous, as the smelters' expenses do *not* increase in proportion to the richness of the ore.

If, now, your correspondent will bear in mind, that the *real* transaction is the purchase of copper ore—that the smelter knows his business, and will buy on terms by which he can make a profit—that he will be entitled to 2*l.* 15s. on each ton of ore as *return charges*, to be deducted from the calculation of product and standard—that on low grade ores, requiring 20 tons of ore to give a ton of copper, he will have a deduction of 55*l.* return charges—while on high grade ores, requiring 5 tons of ore for the ton of copper, he will have only 13*l.* 15s.—he can afford to have a high standard for the low grade; while he must have a low standard for the high grade, in order to have their results equal. "Standard" is, therefore, a *mere fiction*, as are "return charges;" they serve a purpose which habit has rendered familiar, but which is obviously not comprehended by multitudes even in Cornwall and Swansea, and by few out of those places; it does not *govern* the price of ore, but is a *result* of real transactions, dependent for its amount not so much on the value of copper, as on the amount of the return charges, which are a mere arbitrary amount, bearing no relation to the real expense of converting the copper into a marketable state. "Standard" may, however, be said to be the value of a ton of copper in the ore, conditional that the smelter may have 2*l.* 15s. deducted from each ton of the ore in which the copper is contained, as the 1*l.* is $4·44, provided the party is allowed to add 9 per cent. to each 1*l.*, for which his bill is drawn.—G. B.: *American Institute, New York, May* 28.

MINING IN CANADA.

SIR,—I send you the enclosed for your valuable paper; I am happy to say, that having seen the samples of ore sent to New York last winter, and the parties bringing it, I have great confidence in the fidelity of the reports given in the extracts below. It would not surprise me, should Canada West prove another Australia, and I am quite sure that Lake Huron will surpass Lake Superior in the value of its copper mines. G. B.

American Institute, New York, May 18.

LAKE HURON COPPER REGION.

As the season is fast approaching when crowds of adventurers will be flocking to the mineral regions of Lakes Superior and Huron, a brief account of the Bruce Mines, belonging to the Lake Huron and St. Mary's River Company, may be interesting to the public. These mines, which are situated on the north shore of Lake Huron, opposite the Island of St. Joseph, and about 70 miles below the Saut—within 30 hours' run by steamer from Detroit—were discovered, during the early part of last summer, by an exploring party under the direction of Capt. Keating, late of the Indian Department, her Majesty's service. In addition to the location on which they are situated, the same company have three others, situated either on the shores of Lake Huron or on the banks of the St. Mary's River, and all below the Saut. The Lake Huron and St. Mary's River Company was first organised in Montreal, in the early part of November last, and, immediately afterwards, Capt. Keating, accompanied by Mr. Arthur Rankin, of Sandwich, proceeded to the Island of St. Joseph, from whence the latter gentleman, accompanied by an experienced practical miner, proceeded to the location. After spending two days in examining the veins, &c., he set out, in an open boat, for the Saut, on the morning of the 20th of November, in order to take the steamer *Champion* on her last downward trip for the season, having, in one day, got out a sufficient quantity of ore to fill 16 barrels, besides several blocks, one of which weighed 600 lbs. Another weighing about 200 lbs., was left by Mr. Rankin at the office of Messrs. Coe and Coit, in this city (Detroit). Part of the ore was taken to Montreal, and the remainder to New York, from whence about a ton was sent to Baltimore to be smelted, where it was found to contain 20¼ per cent. of pure copper. On the 12th of Dec. last, Capt. Keating, with one regular miner and four labourers, commenced operations by sinking a shaft in one of the veins on the location, and, when the great disadvantages against which this small party have had to contend, from the lateness of the season, the great depth of snow on the ground, &c., are taken into consideration, it certainly must be admitted that the progress which has been made is truly wonderful; its speaks volumes, indeed, for the value of the Bruce Mines, so called in honour of his Excellency Lord Elgin, and we heartily congratulate those gentlemen who are fortunate enough to hold shares in the Lake Huron and St. Mary's River Company.

The following are extracts from two letters, written by Capt. Keating, who has remained on the spot throughout the winter, in charge of the works which have been carried on, to Mr. Rankin, which, we have no doubt, will prove interesting to the public:—

Extract of Letter, dated Bruce Mines, Feb. 18, 1847:—"We commenced by uncovering about 40 ft. of the vein, and getting out the surface ore, which is of the richest description, and became satisfied, that what might have been merely a bunch of ore was a good and well-defined vein, rather exceeding 2 ft. 6 in. in average width. After some time thus spent in carrying down stopes, as they are technically called, to the depth of about 3 ft., we commenced sinking our shaft at the eastern extremity, where the rather hard rock appeared softer and more favourable. The varieties of ore are yellow copper, horse-flesh, ickiesint, purple, blue, and we have found, of late, a considerable quantity of grey sulphuret, largely intermixed with the others. The shaft is sunk to the depth of 2½ fms., and so far has been carried down 12 ft. by 9. Our pile consists of upwards of 60 tons of rich ore, the greater part of which, Harris (the head miner) says, will only require breaking, and will not (so good is it) require to be at all washed. Thus, you will see, that without some extraordinary occurrence, we shall exceed, by a considerable quantity, 100 tons ere we meet again. Nor is this all. Harris has discovered a vein not far distant from that now working, of precisely the same quality, and about the same width. Upwards of a ton of copper ore, which was taken out to test it in two blasts, leave no doubt upon the subject. I have also been fortunate. One rainy Sunday, having seen a partridge on going to my hare-traps, I returned, by a short cut, through the woods, and came on a rather high ridge of rock, not more than 300 yards from the shore, and stumbled upon a magnificent vein, of fully 80 ft. in width. It appears, evidently, to be the continuation of that showing itself at the little point which you may remember, and where you shipped most of the ore you procured. I immediately took Harris to see it, and he was quite surprised at its extent, and proposed putting a few blasts in it to ascertained its quality. This was done accordingly, and the result was similar to that in the former case—for, in two blasts, more than a ton was got of a very fine quality, and containing black copper, the yield of which is beyond that of any other ore, by the miner's account."

Extract of Letter, dated Bruce Mines, March 16, 1847:—"The *Courier* arrived yesterday, and I received to-day your welcome letter of the 26th Jan last. I hasten to reply to it. Our prospects are cheering indeed. As my last letter will have apprised you of what has been done, and as everything has been going on even more favourably than before I wrote last, our share of the matter will have been well done. We have now full 100 tons of ore of the best quality, much of it far superior to what you took down, the proportions of horse-flesh being greater. We have also discovered and blasted into a vein 18 ft. wide, of a similar quality, and on the same location. Our shaft is 4 fms. deep, and the vein better and wider than on the top. You will, I think (and so are all who hear of it), be much surprised at our progress with five men, and one being always cooking, and our pile looks splendid. I would not give this location, which I think teems with veins, for any two on Lake Superior. I expect to have at least 150 tons when you arrive. Each day gives continued and increasing success. To-day some beautiful specimens were brought in, chrystals of spar and copper thickly intermixed, and also sulphate of barytes."

Sandwich, Canada West, April 28, 1847.—"Mr. Hublut and Mr. Peck, two gentlemen from Sault Ste Marie, arrived in Detroit on Saturday last: they were at the Bruce Mines on the 22d March—they have brought some beautiful specimens, with such reports of the richness of the mines, as to cause quite a sensation in Detroit. Mr. Peck says, he never could have imagined anything so productive, and that it would be impossible to overestimate the value of the location—he declared that we can send down 1000 tons of ore this summer if we choose."

DEE-BRIDGE ACCIDENT.

SIR,—I hope the Dee-bridge accident will prove a lesson to some of our short-sighted railway directors; for it is evident, from the span of the bridge, and the dimensions of the cast-iron beams, that it is altogether an engineering blunder, and no other plea can substitute itself; it was wisely said a few days ago by a correspondent of the *Times*—"Let the public take care of themselves." It is wonderful that these smashes do not more frequently occur, when it is taken into consideration the mere boys that are put in charge of the works as resident engineers, because they are recommended by some of the director fraternity—perhaps, relations—and, therefore, must be engineers, no matter as to knowledge—*Felicitas multos habet amicos.* When the contracts are let for the execution of the works, this department is given to an experienced contractor, who again lets the work to a sub-contractor; and the result is, these tyros of engineers are nothing more than a mere handle in their hands: the contractor and sub-contractor try to get as much as possible out of the works, while public safety is a secondary consideration, or, rather, no consideration at all—if a bridge falls, the excuse is, "Why, the foundation gave way." It certainly must be a very indifferent sort of an engineer that does not try his foundations before he commences his brick or stone-works; but, curious to say, this is never mentioned in the engineer's report to the directors—and the shareholders, of course, pay for the deficiency.

The railway directors, when they give out the prospectus of their intended lines, if they can only get the name of a great engineer to it, they think themselves all right—because it makes it look respectable; no matter whether the great engineer is enabled to superintend the work during the construction, so that his name appears in the prospectus. It is evident, that these persons have got more work by far than they are able to attend to, and that a great deal of the work done is never seen by them personally. I consider as much attention ought to be devoted to the construction as to the drawing of plans, or writing reports. In the construction of a railway depends the lives of the public; but I never heard of a plan falling in or killing any person.

I trust the foreman of the jury will be wise enough to question the abilities of the resident engineer of the Dee-bridge; and, likewise, how many times the works were visited by the engineer-in-chief during its construction—this I think ought to be laid before the public, and then see if it will be approved of or not. Again, the Government ought to place inspectors on [illegible] during its construction, instead of leaving it until the [illegible] when the brick-work looks nice—the slopes of the [illegible]nts finished, the outward appearance is very well—[illegible] is well known, that most of our railway directors [illegible]d with the construction of railways; but I consider, before the [illegible] sanction any bill for railways, the directors ought to produce evidence to the Government that there are, at least, three of the directors practically acquainted with the construction of railways—these persons should [illegible] the works, and see that they were properly executed, [illegible] would profit by it, and the public would be safe.—CIVIL. *London, June* 17.

JUMPING OF L[illegible]OTIVE ENGINES—ITS CAUSE & PREVENTION.

SIR,—Any [illegible]ch may lead to greater safety in railway travelling will, I t[illegible]pace in your valuable paper. The cause of locomotive engines first *jumping*, and then running off the rails, has never been accurately accounted for. This serious circumstance usually occurs when the engine is descending a gradient. The locomotive engine has then, *cæteris paribus*, an increasing velocity according with known laws. The power of steam is injudiciously superadded, and thus an artificial power is made to co-operate with the naturally accelerating velocity. The artificial power increases the velocity on the descent until the wheels (revolving levers) fixed to the crank-axle outrun the piston. As soon as that occurs, the whole of the steam in the cylinders does not escape. The quantity which remains at first is very small, and produces no perceptible effect, but soon accumulates and becomes an elastic medium resisting the piston near the end of the stroke, consequently virtually shortening the action of the piston and connecting rods, and thus checking the revolution of the wheels. The whole superincumbent weight continues its increasing velocity. Now, it is evident, that if the wheels are checked while the heavy body resting on them pursues its rapid motion, that the two forces are not at that moment co-operating, producing a momentary check to the whole descending mass. As the resistance increases the check becomes greater, until at length the superincumbent weight pulls, through the medium of the wheels, the piston with such force against the steam which has not escaped from the cylinders, as to lift the wheels and give the "jumping" action. The bearing on the rail being lost, the whole engine readily deviates and runs off the rails. The means of preventing this species of accident appear to me to be two. First, to increase the size of the apertures by which the steam escapes from the cylinders. Secondly, to cut off all the steam as soon as the locomotive engine has commenced its descent, and not to give any steam until the engine has reached the level between the gradients.—NATHANIEL OGLE: *Heath-lane Lodge, Twickenham, June* 16.

ON BLASTING WITH GUN-COTTON.

SIR,—I have read in your Journals of the 5th and 12th inst., an announcement of the experiments which have been made with gun-cotton at the Limestone Quarries at Dowlais, Tredegar, and Ebbw Vale, in the presence of some highly-influential gentlemen connected with the South Wales Iron-Works, accompanied by several mineral agents and workmen—in fact, by such an assemblage of men of practical talent as to evince to the world that there is a desire on the part of the mining community to give this new invention a fair trial. At the outset of a new invention, especially if of a novel description, men's minds are occasionally led astray, and the inventor buoyed up by undeserved praise and false glitter—not that such is entirely the case with the gun-cotton, for it undoubtedly possesses merit, and may, possibly, in some instances, meet the expectations of its promoters, and be occasionally used as a substitute for powder in war operations—but that it is ever likely to supersede it in ordinary blasting operations, there is great doubt; and, as the time has now arrived, when its powers are becoming generally understood, I hope the following remarks will not be considered ill-timed, and that they will receive credit for the candour with which they are written.

Those who are practically conversant with blasting operations, are well aware that it is not only desirable to use a substance of an explosive nature, but that it is also desirable to have it of such a character, that it will not explode instantaneously. They are well aware, that a fine-grained sporting powder explodes quicker than a large-grained blasting powder; they are also aware, that the latter powder, which explodes the slowest, accomplishes more work than the fine-grained one which explodes quickest—in short, the object to be obtained is, to get a compound which will not only explode, but which will also spread its explosion over as long a period of time as possible. To obtain this object, many expedients have been resorted to—some of which have been attended with partial success. This object of having the blast to take place slowly, can only be seen obviously by its result in practice—which is, that it effectually shakes and cracks a large portion of ground surrounding the charge, without, as it would otherwise do by a too sudden explosion, shattering to atoms only the small portion lying at the weakest part. Now, gun-cotton, by its instantaneous explosion, instead of possessing this advantage, is the very reverse to it. What, then, are the real advantages to be derived from the use of gun-cotton to the mining community? There is but one I can see; and that is, as a substitute for powder in the face of an underground working, where, for certain reasons, it might be for a time inconvenient to get a supply of fresh air, to clear away the powder smoke. Although, in making this admission, I beg it to be distinctly understood, that I do so without being acquainted with the exact nature and quantity of gas left behind the gun-cotton after an explosion, and which, although not perceptible like powder smoke, may yet be of a noxious character, and, from its want of colour, only the more deceptive. As compared with ordinary blasting powder, what are its merits? Its promoters say it possesses six times the power of it; and they also tell us, in their advertisements, that it costs about seven times the price—viz.: for gun-cotton, without cartridges, at the wholesale price, 3s. per pound—whilst powder is retailed to the workmen at 5d. In an economical point of view it has, therefore, no claims to be used. But the grand and last view I intend taking of it is, does it conduce to the safety of the workman in the critical operation of blasting? Scarcely a week passes, Mr. Editor, without your columns recording some accident that has occurred during the operation, even with powder; and I shudder to contemplate what the consequences might be, if, in addition to a substance which now so frequently explodes prematurely by a spark, during the operation of tamping, another should be introduced which should be not only more susceptible of ignition by the same means, but should possess also the likelihood of explosion by the infliction of a blow not so hard as those generally given during the operation. That I am not dreading phantoms, is confirmed by the reports of the gun-cotton experiments recorded in your paper, and which have taken place under the care of a practical engineer; and if he—the exhibitor of the use of it—a man who has been engaged for years in engineering, cannot control its destructive power, how is it likely that a workman, without his knowledge and skill, could succeed better? Already has it laid low, and, to all present appearances, disqualified for life, the Aberdare Iron Company's active and intelligent mineral agent, as well as a workman at the Dowlais Limestone Quarries—not through their own carelessness, as stated in the garbled report of the local papers, and unconsciously copied into the *Mining Journal*, but whilst witnessing the promoter's own agent making his experiments, and, acting under his instructions as assistant, and not as principal. Since then, the very promoters themselves cannot control their Frankenstein—the vast power that has already injured and killed more than I have alluded to, and which has not even spared the exhibitor himself—ought we not, as we regard the life of our fellow-creatures, to pause before we place such a compound in a workman's hands?—D.: *Merthyr Tydvil, June* 16.

INDIA-RUBBER FOR SHIPS' FENDERS, &c.

SIR,—During observations at sea and on shore I have seen much damage done by vessels lying alongside each other, and near wharfs, &c.; wooden fenders are generally placed between them, hung over the ship's side; but, from their want of elasticity, the bumps are almost as injurious as the contact of the vessels themselves; canvas bags, full of sand, &c., are also used, but nearly the same objection applies to them. India-rubber balls, of large dimensions, and hollow or solid cylinders of the same material, would be of great service; the cylinders might be cast around pieces of old cable, and the balls stuffed with yarn, oakum, &c. ALFRED T. J. MARTIN.

Penzance, June 14.

ON GOVERNMENT INTERFERENCE IN MINES.

RESTRICTED FRIEND,—A great deal has been written lately on the subject of Government interference in mines; and it would seem that many persons have no idea of interference, except by appointing officials to inspect every mine in the country. Now, officialism, although indispensable in many cases, should be avoided whenever possible. As a system, it is well known to be productive of many evils on the continent, where there are officials for everything in which they can meddle; in fact, the system implies an incapacity on the part of the people—while a law, which imposes a penalty for causing injury to others by neglect, simply implies that some persons may be apathetic, as regards the safety of others, unless compelled to adopt precautions—and such a law may cease to operate by the absence of offenders; but with officialism such is not the case: the important individual guides and gives orders, whether his services are required or not; and unless he possesses a vast amount of talent and discrimination, may be worse than useless—besides, accidents frequently occur by the recklessness of the workmen themselves. It is well known, that *needle-pointers* rarely attain the age of 40, their lungs being destroyed by the particles of steel which they inhale in breathing. Some persons suggested long ago, that they should use a magnet to attract the steel, and this mode was found to answer admirably in some cases; yet a medical practitioner, in writing on the subject, says, that the workmen have refused to use it, under the formidable objection that it would appear *womanish*; and it is probable, that if any one of the workmen used it, he would be ridiculed by the others, and, perhaps, compelled to leave the factory—for such men to ask for Government interference would be certainly something like a rich joke, for no system of control would make them more *womanish*—they would continue to act as *men*—that is, they would be as reckless of their lives as if they were of no use to themselves, or to any one else. If anything can be done for preventing accidents in mines, it is to instruct the miners, by means of lectures, free from technicalities, and in such a familiar manner, as to excite their attention. This, and a stringent law, for compelling the owners of the mines to adopt precautionary measures, would have more effect than the aid of officials. Possibly, the miners might be slow in adopting any new mode of working; but this should not be of itself discouraging, when it is considered, that great men have, at all times, been equally obstinate.—JOHN DE LA HAYE: *Liverpool, 6th mo.* 13.

HYPOTHESES ON IRON.

SIR,—I am obliged to Mr. Mitchell for calling my attention to the precise distinction betwixt alloys of metals and mixtures of oxides. My thoughts had dwelt vaguely in comparing those inoxidisable, or difficultly-oxidised, metals, found alloyed in their native state, such as platinum and its compounds. The peculiarity of the alloys of earthy bases detected in pig-iron is, that their quantity bears no proportion to the bulk of earths a blast-furnace consumes, which amount, as a general rule, to three times the weight of the iron obtained. It is a feature worthy of notice for Mr. Mitchell's investigations, that the use of rich ores without sufficient flux—that is to say, a diminution of the proportionate mass of earths—tends invariably to imbue the iron with a red-short quality.—FERREUS: *June* 15.

SAFETY LAMPS, VENTILATION, &c.

SIR,—In the sentiments expressed by your correspondent, quoted among your Notices, respecting safety lamps, I entirely concur, and have repeatedly recorded that opinion in your pages. Have I not already said, that safety lamps are too frequently a decoy which allures to destruction?—an *ignis fatuus*, which "leads to bewilder, and dazzles to blind." The safety lamp should be confined to its proper place and legitimate object. It should never be used for any other purpose than simply as an exploring lamp, in driving air-heads, in opening the works, &c. But no mine, if properly worked, will require its continuous use—such, for instance, as have a sound basis, like that of Mr. Gibbons's system, which seems to me to combine correct views of ventilation, with a most judicious arrangement and plan of working the mine; and unless *both* are conjoined, every attempt must fail—even the best principles of ventilation, *per se*, if the mode of working the coal be based in error. In my opinion, both science and philanthropy are under manifold obligations to Mr. Gibbons, for the *exposé* of his sound and rational views of working and ventilating the coal field, as propounded in his excellent work *On Ventilation*. As was said by Davy, of the philosophy of the Hon. Henry Cavendish, it will assuredly "be illustrated by discussion, and exalted by time."

The principles there eliminated are sound and certain, and patent to even the "simple" in understanding. The coal field evolves a certain inflammable aërial body, or "gas," highly explosive when mixed with atmospheric air, in certain measures, or proportionals, and producing, when accidentally kindled, those fearful catastrophes, which are so destructive of human life. This gas is *very light*, and occupies the higher parts of the mine on its emission. It remains isolated and distinct, until it is mixed by currents and countercurrents, or an agitated atmosphere. Such an atmosphere becomes more or less explosive, according to the measure of the *mélange*. By excess of atmospheric air, it may be *diluted* beyond the "firing point." It is by no means safe to depend on this, however, and is, indeed, by itself merely a dangerous expedient; because it may be impeded, or altogether neutralised, by contingencies in the circulation of the air, or the process of ventilation. The hydro-carbonate, or "fire-damp," of the mine will most assuredly escape from the pit into the air above, in virtue of its low specific gravity, if allowed to do so, and a way for its escape is provided—viz., an inclined plane, or air-way; and nothing should be allowed to interfere with its course and current upwards—Mr. Gibbons has provided a way for its escape, and no sophistry dare impugn its propriety.

I shall recur to the "ventilating chimney," another wise provision, in my next. I only now pause to express my astonishment at the hostile array which has appeared in your pages against Mr. Gibbons's system. Some of the combatants have evidently not seen the work—others may have seen it, but seem not to understand it—and others again appear altogether unable to appreciate the merits of the system; some even seem to contradict themselves!—others deem it too simple to be efficient—and another class impugn it for lack of novelty! Sufficiently diversified, I must needs admit. What was said of the paragreles, soon after their introduction, applies equally forcibly here—"*On les attaque par tout, la grêle seule les épargne.*" But, Sir, I must needs ask, in wonder and astonishment, by what authority is a correspondent, who signs himself "Henry Johnson," qualified so to administer rebuke to Mr. Taylor, who seems an intelligent and able man; and, above all, to presume to catechise Mr. Gibbons. Assuredly his pretensions aim high. He would do well, however, to conceal the graces of his modest worth behind the shield of humility, lest they be impugned, and not impede the genial flow of sound philanthropy. Of the rectitude of Mr. Gibbons's motives there can be no possible question; and his generous deed, in the gift of his experience to the public, is beyond all praise. I may safely pledge myself, that the accidents which have occurred from explosion in Mr. B. Gibbons's mines, have *not* happened in the usual process of working the mine, but in establishing his principles and carrying the system into practice; as in driving the air-heads in opening the works, and that too in recklessness and disobedience to orders. The very superior security provided, too, is apt to throw the miner off his guard, in reference to casual occurrences. A *multiplicity* of shafts merely, without the provision of other means, will never prevent accidents in coal mines; 2nd, where the safety lamp is constantly and unintermittingly required, such an atmosphere is destructive to health, and is fatally undermining the constitution. J. MURRAY.

Portland-place, Hull, June 17.

ERRATUM.—In my last communication, "On Lamps," read *car* not *bar*.]

VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM.

SIR,—Having read a paragraph in the *Worcestershire Chronicle* of June 2, portion of which is evidently from one of the aggrieved party, concluding in the opinion of the editor of that paper, as to the course I have purposed to convince Mr. Gibbons of his error, I must take this opportunity of informing both parties, that I shall not enter into any controversy, other than through the columns of the *Mining Journal*; and I consider it, Mr. Editor, a great blessing that we have *one impartial* journal in our little water-girt isle, in which the mining community can record their views. And to those who choose to cavil with me as regards my taking up this subject to such lengths, I would entreat them—1st, to read Mr. Gibbons's pamphlet thoroughly and carefully—to compare his views with the present advanced state of science, or with the conclusions arrived at by those parties who have spent a whole life in scientific researches, as applicable to the ventilation and working of coal mines; 2d, to pay a visit to the colliery in question, with pamphlet in hand, and see how far his present arrangement coincides with his views therein recorded, taking into consideration the incalculable sacrifices of human life, while the volume of *black* vapour slowly stealing from the summit of the illusive pile, cannot fail but to remind the visitor of the departed souls, for whom it would appear to the philanthropist perpetually clothed in mourning; 3d, to go through the whole of the correspondence contained in your impartial Journal, touching upon the subject in question, both *pro* and *con.*; and, lastly, to put down the arguments I have advanced by facts and figures, before calling into question the length of my experience, to prove the folly of my intermeddling in these matters; and if the rising generation had not been allowed to take advantage of the greatest perfection to which the falling generation arrived at, and so proceeded onwards, instead of retrograding, I would ask, what would South Staffordshire have been at this moment?

I, for one, cannot consent to remain neuter in this important subject, while such sacrifices are being daily made; but one question I would put to my two *Worcestershire Chronicle* opponents is, that if Mr. Gibbons, with his (admitted) lengthened experience, superior judgment, pecuniary means, and personal strict attention, as also the services of his attentive bailiff and under bailiff for 12 hours every day, combined with the use of the safety lamp, a company of careful colliers, with strict regulations and rules for the guidance of every man in the pit, and more fire for the purposes of rarefaction than his neighbours, cannot render his system inexplosive, or less explosive than his neighbours, what would be the result, if put into the hands of negligent, careless, niggardly, and ignorant masters, inattentive, reckless bailiffs, obstinate, drunken, and careless colliers? What! Mr. Editor, do I hear an echo from the land of Erin, that it would then create a demand for the starving Hibernians in our coal mines?—surely it would. As to the originality of the system, I only know this, that I am prepared to prove that ventilating stacks (commonly termed *snatches*), were in use before Mr. Gibbons was born; and that remains of old stacks may now be found in this district that must have seen trowel and mortar before Mr. G. ever constructed any at all. If I thought that the cry of humanity in the district was less than my own, I would, as desired, desist from further "interfering;" but the fact of *fifteen* individuals having suffered more or less at six different times, and *six* of whom are *dead* in the short space of about *eighteen months*, calls for a passing notice from some one located in the district; and I trust the "youth," in taking this onerous duty upon his own shoulders, may not "diminish his good sense in the eyes of the world."—HENRY JOHNSON: *Dudley, June* 8.

The following is the communication, and accompanying remarks, referred to by Mr. Johnson, as having appeared in the *Worcestershire Chronicle*:—"THE LATE MINE EXPLOSION.—We insert the following at the request of a correspondent:—'You have hitherto refrained from expressing any opinion on the attacks that have been made upon Mr. Gibbons's system of ventilating mines; but, when you reflect upon the right intention with which Mr. G. has invariably been guided, and call to recollection the superior claims he has to originality and ingenuity, you will feel it to be your duty to admit some comments thereon, especially as you have laid before your readers several accounts of accidents that have unfortunately happened in that gentleman's collieries. It seems to be pretty well known, by persons engaged in mining operations, of what Mr. G.'s plan consists, a pamphlet having recently been published by him, explanatory of his system.' [We will not speak of the merits, or demerits, of the said plan, but we believe it to be understood, that it is as expensive (if not more so) as that of any other colliery in the neighbourhood; and when we are satisfied that such is the case, what other than a good motive can Mr. G. have for endeavouring to carry his system into practice? It is true, that he, like the rest of his fellow-creatures, is not infallible—for still accidents do, and will, happen in any other mode extant of getting the various mines; and if attempts at improvement do not continue to be made upon the principle generally in use, to what must the ingenuity of such a man be applied? And if such practical men as Mr. Gibbons cannot do something towards the more effectual mode of securing persons' lives, to whom are we to look to effect such a desirable object? Numerous have been the accidents that have arisen from explosions of fire-damp in the longest established way of ventilating the mines; and we presume, *in three cases out of five*, they have occurred from negligence, or carelessness, on the part of the workmen—not from the system introduced into those mines; but, because there is some originality in Mr. G.'s mode of ventilation, and because he has not been so lucky as to have carried it so far without accidents, he is to be assailed by a party, who, from his age, cannot have had near the experience of Mr. Gibbons. We do not mean to say, but that some of the assailant's arguments are to the purpose, but they are stated in that kind of manner, which is not calculated to speedily convince Mr. Gibbons that he is in error. What need had the assailant to speak so contemptibly of Mr. G.'s *intelligent* and *indefatigable* bailiff? We dare say Mr. Gibbons does think highly of his bailiff, Mr. Moses Taylor; and was there any harm for that gentleman to avow it in his pamphlet? It surely cannot add to the strength of the assailant's arguments; and we think it equally certain, that it cannot increase, but rather diminish, his good sense in the eyes of the world. We hope, if any more communications from the assailing party are inserted in the *Mining Journal*, that they will be more charitable in their views, and not so personal; but it seems pretty clear, that the Editor of that paper is getting tired of such uncourteous communications. The advice that we offer to those prejudiced against Mr. G.'s plan is, for them to wait patiently until sufficient time has elapsed for his views to be properly carried out; and if such accidents, as have hitherto occurred, continue to happen, then will be the time for strangers to interfere."]

DR. CLANNY'S SAFETY LAMP.

SIR,—"*La moitie du monde prend plaisir à médire, et l'autre moitié a croire les médisances*;" or, one-half of the world takes a pleasure in detracting, and the other half in believing all that detraction utters. This French proverb is, unfortunately, too true; and is rendered more odious when upright persons are attacked by anonymous scribes, who not only put forth falsehoods, but even presume, openly, to lecture those who, though not in error, may differ with them upon certain points, even when the cause of suffering humanity may be the subject matter in question! Some months ago, I met at dinner, in the vicinity of this town, a person whom I was told was manager of a coal mine in this county. In the drawing-room, after dinner, he drew me into conversation upon a subject, which was neither agreeable to me, nor commenced in a suitable place—viz.: the value and safety of the Davy safety lamp. My reply was brief; I said that in respect to the latter quality I could not agree, from innumerable experiments, both in coal mines and in rooms arranged for experimenting. This viewer became so earnest, that I considered it my duty to inquire whether he had studied chemistry?—the reply was in the negative; or pneumatics?—no; or the principles of ventilation?—no. I raised my voice, and saying—Sir, there is no use in talking to you, because you know nothing of subjects on which you ought to be professionally well-informed. Need I be surprised, that "An Underviewer" (Newcastle), "*V.*" (Newcastle), and "Veritas" (Newcastle), vituperate me, and all I have accomplished for those who descend into the pit?

In your Number for Saturday, I find a new detractor, designating himself, "An Owner of one of the Collieries where (in which, I suppose) Dr. Clanny says (reports, I suppose) his Lamps are in Use." It requires no stretch of imagination to put the saddle upon the proper *ass's* back, in respect to this colliery proprietor and viewer. I tell this libeller, that I never asserted, nor even hinted, that my safety lamps were in general use; I only mentioned the fact, that they were called into use in such and such collieries, from information obtained from certain viewers and underviewers, as well as from my safety-lamp manufacturers; and all the latter individuals reside in Newcastle, and, as far as concerns myself, I have no interest, directly or indirectly, in the concern. A person of the name of Bonnor, of this town, many years ago, took a patent to prevent pitmen unscrewing their safety lamps, for the purpose of obtaining more light, which never came into use. Upton and Roberts's lamp shared the same fate. It is a falsehood that I ever did, or had occasion for, "bolstering up the pretensions of the lamp," well knowing that if there were any virtue in the lamp, it would (as assuredly it has been) be called into use.

Again, the so-called proprietor of a coal mine uses the following words:—"The impertinent puff of a quack, and not that of a professional man, as he took me to be."—None but a vexed and ill-natured person in respect to another could use such expressions in respect to me. He knows that he dare not give his name, as I would take the earliest opportunity of making the dastardly coward accountable. Ask the community in which I have resided for 40 years, whether such an idea was ever entertained against me? The same poltroon "calls upon me to produce before the public, certificates from the agents at those collieries where he states his lamp to be in use, both to their value, as a means of lighting, the extent to which they are used, and their actual safety compared to other lamps." This is very bold in an anonymous libeller! Let the dastardly fellow hunt these things out—my time is too valuable for such a thankless office; nor have I time even to transcribe this hasty and indignant reply, not to the pseudo viewer, but to the readers of the *Mining Journal*.

The same Number contains a saucy tirade against me—not my safety lamp—for that is above his mark, and criticises my quotations. Wonderful! amongst such *classical*, lurking scribes. Be it known, that I well knew what I quoted, and that I did, as is very common, suit the general meaning, as applied to them and to myself. The other anonymous dealer in slander, who rejoices under the borrowed name "Veritas," also states, in the same Number—"I never said there was any deposition of soot on the Davy lamp, asserted by Dr. Clanny, but on the Stephenson lamp; the Davy lamp, having no glass, there could be no deposition of soot upon it from combustion." I grant that "Veritas" wrote the truth, when he calls me to account in respect to the precipitation of soot upon the Davy—it was a *lapsus pennæ*, and nothing more; but is it not too true, that in the Davy there is a greater accumulation of soot, than in any other safety lamp I ever saw?—therefore, no error, in my opinion, was committed by me in the classification of the Davy and Stephenson lamps. But what shall we say to the second sentence of the above-quoted paragraphs—does it contain one word of truth?—Again, the *veracious* "Veritas" exultingly boasts—"The Davy lamp and I are not thus to be depreciated." As the fly said to the wheel—"What a dust we kick up." Perhaps, "Veritas" may find out, that *this* quotation is incorrect. I find myself at fault, for I am "breaking a fly upon the wheel." "Veritas," still at his dirty work, goes on to remark—"The doctor's 'misinformation' is not confined to that of Jarrow, as I learn on further inquiry, but extends, I am afraid, to every mine in his list." "Veritas" is *afraid* that I might commit errors!—"*Credat judæus appella*"—*ego non*. Let the gist of his vituperation, in his beautiful communication, be carefully read over, and the reader will discover how much he is afraid that I might be found napping. As a proof of his correctness, the gentlemen viewers at Willington (the first on his list, in which he presumes to state that I am in error) are my kind and excellent friends; and, in corroboration, I will transcribe a few sentences from a letter kindly transmitted to me by Mr. John Johnson, one of the viewers in the above-named Willington Colliery"—"*Ex uno disce omnes*:"—

"I have to say, with regard to your new safety lamp, that, since the year 1841, I have generally used it during my inspection of the collieries with which I am connected—and have, consequently, had many opportunities of testing it in explosive mixtures, and also in strong currents of air. With regard to the former test, I have invariably found it to be a perfectly safe lamp; and though I have frequently kept it in explosive mixtures for some minutes, I have never yet known the glass to become dangerously heated. In strong currents of air, travelling at the rate of 8¼ feet per second, or 5½ miles per hour, I have not at any time observed the flame to be affected, which renders it remarkably serviceable to those workmen in a mine who are exposed to them—such as wastemen, &c.; and, as the force of the current is not directly against the flame, it is impossible for any spark to be blown from the lamp. This lamp is a very great deal superior to any other I have seen, with regard to the increased light; and, as the light from the wick does not pass through the meshes of the wire gauze, as in the case with the Davy lamp, you have taken advantage of this improvement, by keeping the texture of the gauze much finer—thereby rendering it infinitely safer in this respect than any other. I shall be glad at any time to give you any information.—April 13, 1846."

I declare, upon my honour, that all the names of the collieries, which I had the satisfaction of seeing printed at large in the *Mining Journal*, some weeks ago, were furnished to me for publication by the owners of the said collieries, the viewers, or underviewers, of those collieries. I am thankful to Providence, that I ever detested falsehoods, or the utterer of falsehoods. Here ends my noticing the vituperations of anonymous libellers.

Swadarland, June 8 W. REID CLANNY.

VENTILATION—Mr. G. SHEPHERD, THE "BLACK DIAMOND," AND Mr. MUSHET.

SIR,—Mr. D. Mushet states, in his letter last week, that it is nothing to my credit to give a public lecture on ventilation, with perfect ignorance of what Mr. Gibbons has done in the adjoining county, and knowing nothing of the *Mining Journal* for the last six months; but I shall prove to him that his accusations are altogether erroneous. First, I had not been either in Staffordshire, or Shropshire, previous to giving the lecture, for several years: the last four years I have been altogether absent from England, in various parts of Europe, chiefly engaged in railway and mining works; and it was not until I returned to London, as I before stated, that I was aware that such a work as Mr. Gibbons's, *On Ventilation*, was in existence, and my return to England is not more than six months since. On my arrival in England, I had something more to attend to than reading letters on ventilation. In some parts where I have travelled, I found a great difficulty in getting letters of correspondence, much more newspapers, of any description; perhaps, this will acquit me of Mr. D. Mushet's charges. Mr. M. charges me with having perverted Mr. Gibbons's system. Can it be possible to pervert 6-ft. area properly ventilating the vast space mentioned by Mr. G. in his work?—or does Mr. M. mean to say, that Mr. G. has so accurately measured the quantity of air required to pass through the works, that a larger quantity would be dangerous?—(*quel idea.*) Again, Mr. M. goes on to say, I should have noticed, had I read Mr. Gibbons's book, the difficulty in extending the chimneys to their present size. I have had as much shaft-sinking under my own personal superintendence, as either Mr. Mushet or Mr. Darlington, both in England and on the continent; and, therefore, I am not obliged to believe all that Mr. Gibbons writes, or what Mr. Mushet confirms; this I well know, that there is more prejudice than difficulty to contend with by far. I suppose Mr. Gibbons found the cost of sinking the shafts the greatest difficulty he had to contend with. Again, I repeat that 6 ft. area is insufficient to ventilate the works properly—for, should any unforeseen obstruction take place in so small a flue, what would be the result? Your correspondent, "Black Diamond," stated last week—"By this new method, it will be seen that the aid of the main upcast shaft, with its valuable capabilities, for the purpose of ventilation, is, for several purposes, discarded." But I wish to ask the "Black Diamond," where those valuable capabilities are?—whether air, instead of flowing through the works, becomes perfectly stationary?—at other times, the one shaft fighting and striving against the other—an occurrence which is so generally experienced when changes take place in the atmosphere at the surface? How often is it that, under these circumstances, the workmen will not venture to descend?—and what has been the consequence when the poor men have ventured?—this the widow and orphan can tell, that have been left to deplore these rash acts. A great many instances of this sort can speak for themselves; where, then, are the valuable capabilities of the upcast shaft? Perhaps that gentleman can further point them out. The "Black Diamond" must certainly have forgotten, that he had written the letter of the 15th May, wherein he states—"Let Mr. Shepherd securely close the top of the wide upcast shaft, as represented in your sketch, and he may obtain a permanent and powerful draught from the downcast shaft, though still inferior to the furnace employed as in the north." Now, did ever any person contradict what he has stated more than the "Black Diamond" has done in his two letters?—G. SHEPHERD, C.E.: *London, June* 10.

FALLING OF THE CHESTER AND SHREWSBURY RAILWAY BRIDGE.

This accident continues to excite the greatest interest and speculation as to the cause among engineers. We gave, in our last Journal, an able letter from our respected correspondent, Mr. T. Motley, of Bristol, in which he shows that the girders for their size, and the material of which they were composed, were vastly overloaded; and we understand that letter has attracted the attention of the foreman of the jury (E. Walker, Esq.), and who is in communication with Mr. Motley on the subject. Several fresh witnesses were examined at the adjourned inquest. Mr. Truss, superintendent of the carriage department, and Mr. Robertson, the engineer of the line, concurred in the view, that the bridge broke down under the weight of the ballast and train; and that the tender could not have gone up the tension-rod, as supposed by Messrs. Locke and Stephenson. Mr. Locke disclaims any intention of attributing conduct which might be inferred from a conversation in the House of Commons to the Admiralty, Board of Trade, or Commissioners of Railways. What he states he did say was, that "less consideration was given to the security of travelling by railways than was given to the navigation or space of tidal rivers and roads which were crossed by railways;" and he referred to a letter addressed by him, in conjunction with Messrs. Stephenson, Brunel, and Cubitt; and he afterwards had to complain that the subject matter of that letter had not been attended to. The object of this letter was, to show that the heights required from the surface of the roads to the springing of the arches being 12 ft., left only 4 ft. for the height of the curve on turnpike roads, and 3 ft. on public roads, and requesting their lordships' assistance in obtaining an alteration of the same.

The jury having adjourned for an hour, and re-assembled—Captain Symons, R.N., inspector of railways, here read the opinion of himself and Mr. Walker, the Government engineer, as to the cause of the accident. This opinion, which was a written one, ran to a very considerable length, and occupied upwards of an hour-and-a-half in its delivery. It was so cautiously guarded by reasonings upon probabilities and conflicting engineering opinions, that the decision of these Government inspectors was not very positively pronounced. Their inference, however, seemed to be, that the fracture was made in the centre of the girder—that the girder of itself was too weak to support the weights usually passing on it—and that the principle of the construction of the bridge was objectionable.

The evidence having here closed, the jury were absent nearly an hour, when they returned the following verdict:—"We find that G. Roberts, J. Matthews, and C. Nevill, were accidentally killed, on the evening of the 24th of May last, in the parish of St. Mary's-on-the-Hill, in the city of Chester, by being precipitated along with the train of carriages on the bank or bed of the River Dee, from the breaking of one of the 12 cast-iron girders constituting the railway-bridge over that river. We find also that I. Jones died on the 26th of May last, from the injuries received at the same time and place, and from the like cause. And we find that T. Anderson came by his death on the 24th of May last, in the parish aforesaid, by being accidentally thrown from the tender on to the rails. We are further unanimously of opinion, that the aforesaid girder did not break from any lateral blow of the engine, tender, carriage, or van, or from any fault or defect in the masonry of the piers or abutments, but from its being made of a strength insufficient to bear the pressure of quick trains passing over it. We feel that the 11 remaining girders having been cast from the same pattern and of the same strength are equally weak, and, consequently, equally dangerous for quick or passenger trains, as was the broken one. We consider we should not be doing our duty towards the public if we separated without expressing our unanimous opinion that no girder bridge of so brittle and treacherous a metal as cast-iron alone, even though trussed with wrought-iron rods, is safe for quick or passenger trains; and we have it in evidence before us, that there are upwards of 300 bridges similar in principle and form to the late one over the River Dee, either in use, or in course of being constructed, on various lines of railway. We consider all these unsafe, more or less, in proportion to the span; still all unsafe. We, therefore, call upon her Majesty's Government to institute such an inquiry into the merits or demerits of these bridges, as shall either condemn the principle, or establish their safety to such a degree, that passengers may rest fully satisfied there is no danger, although they deflect from 1 to 5½ in."—The CORONER said, that the first part of the verdict he would record; but that the latter part, calling for Government interference, might be taken notice of by the gentlemen of the press, and would be forwarded by him to the Board of Trade.

In the *Times*, of Wednesday last, is an excellent article on the subject of accidents on railways, by a civil engineer, in which he attributes their causes to—

1. Failure of the works or the way.
2. Breaking down of engines and carriages.
3. Inattention to, and a want of, more general and complete regulations, for the management and the working of the traffic.

And states that the works must be left to the company's engineers, and the company should be made responsible for their sufficiency at all times. The permanent way, by far the most important part of the works, requires the greatest care in construction, and the utmost vigilance on the part of those who have to maintain the road. To its defects, many, if not all, the unaccountable accidents on railways may be traced. To this subject the attention of Government should be particularly directed; companies should be compelled to use heavier metals, and a general system of laying, better calculated to secure the rails from variation in the exact width of gauge. To bad joints, tight and slack gauge, we may attribute many cases of engines and carriages running off the rails; these defects arise from faulty construction, the use of engines of a weight and at a speed the rails were never calculated to bear, and the great difficulty workmen must experience in detecting, upon ordinary inspection, those imperfections which have so often been the cause of accidents.

It is obvious, that with a uniform surface of rail, engines and carriages cannot but run steadily so long as the wheels remain in good order. Oscillation, generally attributed to the engine, or carriage itself, invariably proceeds from defects in the permanent way; hence the importance of greater attention to this part of railway construction. Government should call upon engineers to agree upon certain points connected with the subject, such as weight of rail, the best mode of laying way, in straight line, curved line, sidings and crossings, at junctions, and at stations, in order to carry out their recommendations upon all new lines, and effect alterations where defects exist at present. Had this rule—"sidings, points, and crossings, are not be laid into, or on the main line against the direction of the trains" (a rule laid down by most engineers)—been observed, the melancholy accident to the mail train at Wolverton, on the 5th inst., would not have occurred.

As to engines and carriages—locomotives are growing in size and weight every day; a limit to their length, height, and weight, for each class of traffic (express, ordinary, or goods), ought to be enforced, both on the broad and narrow gauge; and the principle of lowering the centre of gravity by a different arrangement of the wheels, such as that lately tried by the London and North-Western Company in an engine constructed by Mr. Crampton, ought to be adopted.

The tenders, so often overloaded, require alteration; the great weight of water and coke should be brought down, and six-wheeled tenders only allowed.

Breaking of wheels and axles occurs frequently, and such accidents are most difficult, in fact, almost impossible, to guard against—indeed, these may be considered the only excusable accidents on railways. The particular form of wheels and axles, and the mode of manufacture, is a most important subject, in which Government interference is necessary to enforce regular examinations, and to prevent that long use which renders them daily more and more brittle. The number of miles travelled over should be limited, and the size, thickness, and quality of the tire, should be prescribed and maintained.

These are a few points to be considered by practical men in framing general rules to be observed upon all railways, in order to render such means of locomotion as secure, easy, regular, and expeditious as it ought to be.

IRON AND COAL TRADE OF AYRSHIRE.—An intelligent correspondent communicates as follows:—In consequence of the depression in the iron market, the Ayrshire ironmasters and coalmasters have resolved to reduce the miners' and colliers' wages from 5s. to 4s. per day. This the men are unwilling to accede to, unless the quantity of ironstone and coal which they are required to put out is also reduced. As the masters will not agree to this, many of the men have received their warning, while others are already idle. It is expected that the men will consent to the reduction in a few days. Owing to the high price of coals in Ayrshire lately, the shipping trade of Irvine, Troon, and Ardrossan, is beginning to suffer, as many vessels which were wont to be supplied with coals at these ports, for Ireland, are now procuring them on the Cumberland coast, and in Wales, where the price is more moderate. In the Principality, colliers' wages are only 3s. 6d. per day.—*Dumfries Courier.*

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The next MEETING will be HELD at OXFORD, and will commence on WEDNESDAY NEXT, the 23d of JUNE, 1847. 50

JOHN TAYLOR, F.R.S., General Treasurer,
2, Duke-street, Adelphi, London.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London. 51

By order of the directors,
D. RANKINE, Treasurer.

Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

DUFFRYN LLYNVI AND PORTHCAWL RAILWAY.—Notice is hereby given, that the ADJOURNED ANNUAL GENERAL MEETING of the proprietors of this company will be HELD at the Wyndham Arms Inn, at Bridgend, on Monday, the 28th day of June inst., at Twelve o'clock at noon. 52

By order of the committee,
W. S. BRADLEY, Clerk.

Porthcawl, June 7, 1847.

TO MINE AND COLLIERY PROPRIETORS, SLATE QUARRY OWNERS, RAILWAY CONTRACTORS, IRONMONGERS, DEALERS IN GUNPOWDER, AND OTHERS.

MESSRS. JOHN HALL & SON, the PATENTEES AND SOLE MANUFACTURERS OF SCHÖNBEIN'S PATENT GUN-COTTON, 53

Respectfully state, that they are now prepared to SUPPLY the PATENT GUN-COTTON (compressed for the convenience of carriage), in round and square paper cases, of 4 ozs. each, packed in boxes, containing 50 and 100 cases each, at the price of 3s. per lb., for ready money.

Also, in tubes or cartridges of... 1, 1½, 1¾, and 1¾-inch diameter;
Containing ..... 2, 4, 6, and 8 ounces each, at the
Additional charge of ..... 1, 1½, 2, and 2½ pence, each tube or cartridge.

For blasting in slate quarries, paper tubes will be supplied, 3 ft. in length, containing 1 oz. of the Patent Gun-Cotton per foot.

4 OUNCES OF GUN-COTTON } equal in power to { 24 OUNCES OF BLASTING GUNPOWDER,

As proved in mortars, similar to those used by the Board of Ordnance, for the proof of gunpowder.

OFFICE—23, LOMBARD-STREET, LONDON.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their **IMPROVED PATENT ELASTIC METALLIC PISTONS.** 54

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

ELECTRIC TELEGRAPHS.—As INVENTORS and PATENTEES of the ELECTRO-TELEGRAPHIC CONVERSER, the principle of which is far more SIMPLE, CERTAIN, and PERFECT, than that of ANY of the TELEGRAPHS at present known to the world, we cannot but deplore the necessity for still keeping secret the details of the various improvements comprised in our patents, because we are confident, that, when once they are made public, their advantages will be so manifest, as to sink the best of its predecessors into comparative insignificance. 55

When we assert that our instrument is not subject to derangement from atmospheric influences—that it is perfectly free from vibration, and that its power is unlimited—which we shall be able to demonstrate by its application to *a thousand miles of wire*, through a greater number of instruments than can be used under any existing system—we hope that we have said sufficient to induce all concerned to await the enrolment of our specification, which must take place early in August.

We avail ourselves of this opportunity of disclaiming all connection with any Printing Telegraph.—140, Holborn-bars.

BRETT & LITTLE.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.) 56

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 57

CLARKE AND VARLEY'S RESILIENT ATMOSPHERIC RAILWAY.

Having from the first been convinced of the superiority and complete efficiency of this simple, yet perfect, plan for railway traction, we have much pleasure in publishing the following flattering and gratuitous opinions of Mr. Sims, the eminent Cornish engineer, on the subject.

DEAR SIR,—Having a few days ago examined your newly-invented atmospheric tube, now in operation near the Blackwall Railway, I have felt so much pleased with its very great simplicity, its great efficiency as regards the principle, and its very great economy, both as to laying it down, and the working cost after it is laid down, that I beg to offer a few remarks on the subject; and as I am fully convinced, that no other atmospheric scheme hitherto invented can compete with it, I should be very glad if I could in any way promote its general adoption.

First, as regards the simplicity of it, the most prominent feature is the doing away with the valve, this being the great evil in all other attempts to carry out the principle; and I have no hesitation in saying, that if any engineer attempts to use a valve, after properly inspecting your plan, his employers are likely to suffer from his ignorance, or prejudice, or both. There is no possibility of keeping the leather valve tight on all occasions. For instance, in dry windy weather the dust and gravel will get under it, when the impossibility to keep it tight can easily be seen; hence, in a great measure, the many accidents to the stationary engines on the Croydon line, caused by driving the engines at extraordinary speed, in order to obtain a vacuum when the valve is imperfect. But the whole cause of leakage is not in the valve, it being partly caused by the great imperfection of the cast-iron tube as a cylinder, being laid down as brought from the mould. This is not the case in your tube, as that is almost as perfect as a bored cylinder, and, of course, improves by wear. The opening and closing of your tube is so perfectly simple and effective, that I have no idea of any improvement on it. The edges appear to be as perfectly air-tight as any valve can be made; and, contrary to the leather valve, the more they are used the more tight, if possible, they become.

Respecting the economy of laying down, it appears to me that 3000*l.* per mile, after allowing for manufacturer's profits, will be high enough; and I think the cost of working it, will be very little above one-half that of the present system. The amount of friction to open the pipe is so little, that it is scarcely an object worthy of notice.

Cannot you induce the directors of the Blackwall Railway to adopt your plan, instead of the very imperfect and very expensive plan they have now got? They would then have a safe, cheap, and steady working line. You could lay down your tube with a certainty of doing the work with much greater dispatch, much more safety, and at an immense saving to the company in working expenses. I consider your plan of working a platform very efficient, as it is sure to work well; and as regards the weight to be moved, there will be no difficulty in this, as it will be seldom, if ever, so much as I have seen on swing bridges moved on the same principle.

I think your plan for stopping the train is very good, and very much superior to the break on the wheel, as you can obtain a much greater amount of friction with the same power, and, therefore, a much greater certainty of checking and stopping the train when required. I apprehend you will have no difficulty in moving the carriages sideways, for the piston to enter the tube. In fact, I see no difficulty in working your tube on that line; but, on the contrary, consider it beautifully adapted for it.

You will, I think, find one of the great points of economy in the fact of your having no dead weight to move backwards and forwards. At present, I understand the rope alone absorbs 250-horse power in friction and useless weight to be drawn. And I also find, that in the locomotive system, the engine absorbs about 50 per cent. of its power in moving itself, and overcoming the friction of its various movements, besides constantly destroying the road in sleepers, rails, chairs, &c. &c.; and whether the load be heavy or light, the power expended is much the same. In your system, you expend little more than is required to move the lode; and you, therefore, exhaust the tube only in proportion to the load you have to contend with. You can also start very much quicker than a locomotive, because the weight you have to move is so much less. There is an important feature connected with your tube, which is its being so easy to manufacture, and at the same time as easy to make as perfectly air-tight as any valve can be made. The labour in fixing must also be very easy, as every part is made to fit with the greatest exactness before it is laid down. The changing a pipe, in case of accident, can be accomplished in a few minutes, which is by no means the case with the cast pipe.

I fancy, from the information I have had relative to the stationary engines on the Croydon line, that they were not made so strong as they should be, and hence one would infer the number of breakages that took place; but when we take into account the very great speed these engines were driven, in order to exhaust the tube to admit of the starting of the train (and which was, of course, caused by the leakage of the valve), we may safely say, that the strongest engines would, under such circumstances, be subject to accident. Judging from the almost perfect tightness of your tube, I venture to say, that at no time will an extraordinary speed of stationary engines be required. You have no wear and tear of valve—no scaling, no lubrication required, no heating, no grease to arrest the progress of gravel and dust, and thereby preventing the valve from closing tight; from the small opening required for the coulter, little or no tendency to injure the elasticity of the tube, and very little power required to open it. That you will have a very great deal of prejudice, and probably no small amount of ignorance, to overcome, there can be little doubt; but I have no hesitation in saying, that it is not only a beautiful invention as regards simplicity, economy, and efficiency, as a motive power, but that it also overcomes the whole of the objections to the atmospheric system, and must ultimately supersede the use of locomotive power—at least for all short lines. With my best wishes for your success,

I remain, your's, &c., JAMES SIMS.

BRITISH MINING OFFICES,
41, MOORGATE-STREET, LONDON.

The Tin, Copper, and Silver-Lead Mines in Cornwall, Devon, and Wales, have lately drawn more than the usual attention of capitalists to their immense wealth, and the large returns made by an efficient application of capital; while the increased knowledge of geology, the vast improvements in the steam-engine, and the economy in working, together with the low price of materials, make them a source of greater and more certain profit than at any former period—thereby constituting them a legitimate, safe, and profitable investment.

These offices have been established at the suggestion of several gentlemen connected with the mining interest, and who have long been impressed with the conviction, that a desideratum, such as the present, is essential in promoting the objects of those who may embark in mining pursuits; and, when it is considered that there are large tracts of rich mineral ground unexplored, where money, judiciously laid out, would produce very handsome profits, there can be no doubt but that such offices will be found highly beneficial to the mining interests—whether considered with reference to the lords or adventurers.

Mr. J. B. Clymo, of Cornwall, who is acknowledged to be a scientific and practical miner, will be in attendance at the offices (unless when required for the purposes of surveying, &c.), and will give the fullest information as to the respective mines, as well as upon mining generally, on application personally, or by letter. It is further intended, for the satisfaction and security of those who may confide their interests to this Office, that all Mineral Property shall be thoroughly examined and reported upon by respectable and competent mining agents, previously to the investment of capital.

A "finance committee" will be appointed from the body of shareholders in each mine, in whose names the funds will be paid into the banker's hands, to defray the expense of working; and as the "Cost-book Principle," under which the best regulated mines in Cornwall have been advantageously managed, will be strictly adhered to, the shareholders will be subject to no liabilities, inasmuch as the accounts will be audited and settled every two months, and copies transmitted to every shareholder. A majority of the shareholders in each particular mine will have the entire management and control thereof, at the meeting called every two months, whether present or by proxy.

A "Register-Book," for the Purchase and Sale of Shares in the various Mines, will always be open for inspection; and when purchases or sales are effected, a trifling charge will be made towards defraying the expense of the offices, while the advantages of rendering transactions of this nature perfectly open, must be manifest and duly appreciated.

All Reports received from the Captains or Agents of the different Mines will be copied into Report Books, to which access can at all times be had. 58

Parties in the country possessing good and valuable mining ground will be assisted in the formation of a company for working it; and the proprietors of any mines, who may have no offices in London for reference, can transmit their weekly or monthly reports and accounts to be referred to by the London adventurers.

The Offices have been conveniently fitted up, and rooms set apart for the use of those who may be desirous of conferring together upon matters connected with the Mining interest.

The necessary arrangements for conducting the correspondence, and affording such information as may be sought by parties residing either in London or the country, have been completed, and are such as, it is presumed, cannot fail to secure the support and patronage of all those whose object is the acquisition of accurate data connected with mining operations.

Highly respectable agents have been appointed in the principal towns in the kingdom for the allotment of original shares in the different mines, the affairs of which are conducted at these offices.

All further particulars may be obtained on application at the Offices, 41, Moorgate-street, London.

THOMAS HENRY TAUNTON, Secretary.

WHEAL BARBARA MINING COMPANY.—At a Special General Meeting of shareholders, held, pursuant to circular, at the British Mining Offices, 41, Moorgate-street, London, on Saturday, the 12th day of June, 1847. 59

WILLIAM FENTON, Esq., in the chair.

The following minutes of the meeting, held on the 13th May, 1847, at No. 8, Gresham-street, London, were read and confirmed—

That the mine be in future conducted, and managed in all respects, on the Cost-book Principle, under which the best regulated mines in Cornwall and Devon have been advantageously worked; the shareholders not being subject to any liabilities, as the accounts are settled monthly, and the sole management of the mine vested in a majority of the shareholders, either in person or by proxy, at their two-monthly meetings.

That the business of the mine be removed to the British Mining Offices, 41, Moorgate-street, London, with the confident expectation on the part of the shareholders that, in effecting such change, a reduction of expense of London management will result therefrom; at the same time, that the interests of the company will receive every attention.

A deputation of shareholders from London and Manchester having visited the mine during the present week, and reported most favourably on its workings and prospects, as being of a highly satisfactory and encouraging nature,

It was proposed by D. L. Williams, Esq., and seconded by W. Battersby, Esq.,

That the thanks of the shareholders are due to the gentlemen composing such deputation, for their services and attention.—Carried unanimously.

It was proposed by J. Truscott, Esq., and seconded by D. L. Williams, Esq.,

That Messrs. Gouldesbrough and Shearman, of Manchester, be elected auditors.—Carried unanimously.

The accounts having been audited—

It was proposed by D. Dutholt, Esq., and seconded by G. Chartres, Esq.,

That the accounts submitted to the meeting be received, approved, and entered on the minutes.—Carried unanimously.

It was proposed by W. Shearman, Esq., and seconded by J. Gouldesbrough, Esq.,

That the shares unappropriated be offered for sale to the shareholders at £3 per share, in proportion to their present holding, until the 12th day of July—after which time, all such shares as may then remain on hand shall be disposed of as the committee may determine.—Carried unanimously.

It was proposed by W. Shearman, Esq., and seconded by W. Battersby, Esq.,

That S. Lewis, Esq., J. Truscott, Esq., D. Dutholt, Esq., W. Fenton, Esq., and D. L. Williams, Esq., do form the finance committee for managing the affairs of the mine, and appointing the bankers, with whom the moneys shall be lodged in the names of the committee, and drawn out by cheque, signed by at least two of them, and countersigned by the secretary.—That the said committee be elected for two months, or until another committee be appointed, in accordance with the Cost-book Principle.—Carried unanimously.

It was proposed by J. Marsh, Esq., and seconded by G. Chartres, Esq.,

That any number of shareholders, holding collectively not less than 500 shares, may, at any time, require the purser to call a special general meeting, of which at least seven days' notice shall be given by letter, and the purpose for which such meeting is called shall be declared in the circular convening it.—Carried unanimously.

W. FENTON, Chairman.

It was proposed by J. Truscott, Esq., and seconded by G. Chartres, Esq.,

That the thanks of the meeting be given to the chairman, for his able conduct in the chair.

T. H. TAUNTON, Secretary.

STATEMENT OF ACCOUNT.

To 1280 Shares, appropriated for work done, as per agreement				
470	ditto sold, at 30s.	£	705	0 0
810	ditto remaining—present value £3 per share		2430	0 0
	Furniture sold, as per account, to the British Mining Office		19	3 10
In 2560 Shares.	Total	£	3154	3 10
1846—By costs for September		£	73	7 7
" October			25	8 8½
" November			44	19 3½
" December			36	12 3
1847— " January			61	11 7½
" February			91	4 8
" March			126	16 3
" April			84	11 0
By 810 shares remaining on hand, at £3 per share			2430	0 0
Balance carried down			179	12 5½
Total		£	3154	3 10
To balance brought down		£	179	12 5½
To ditto shares			2430	0 0
Together		£	2609	12 5½

The above accounts have been examined with the vouchers, and found correct.

W. SHEARMAN,
J. GOULDESBROUGH.

SILVER VALLEY MINING COMPANY.—At the Annual General Meeting of shareholders, or adventurers, held at the offices of the company, 44, Finsbury-square, on Friday, the 11th inst., pursuant to circular, 60

RICHARD HODGSON, Esq., in the chair,

The circular convening the meeting having been read, the reports of the mining agents, and that of P. N. Johnson, Esq., were submitted, as also the accounts of the company.

Resolved,—That the reports and accounts now submitted be received and adopted, and entered in the cost and transfer book.—Carried unanimously.

Resolved,—That Messrs. Goodhart and Smith be re-elected auditors for the ensuing year.—Carried unanimously.

Resolved,—That the thanks of the meeting be given to the chairman and directors for the management of the company's business.—Carried unanimously.

Resolved,—That the thanks of the meeting be given to the auditors for their attention in auditing the accounts of the company.—Carried unanimously.

RICHARD HODGSON, Chairman.

A vote of thanks to the chairman for his services in the chair, and the interest manifested by him in promoting the objects of the adventurers, was passed.

NORTH WALES MINING COMPANY,
COUNTY OF MERIONETH.

Divided into 12,500 shares, limited to £10 each, and carried out upon the Cost-book System, with a deposit of £2 10s. per share. 61

OFFICES, No. 2, NEW BROAD-STREET, LONDON.

Applications for shares and prospectuses to be made at the office.

W. T. GRIFFITHS, Purser.

SMITH AND ENGLISH (LATE ANDREW SMITH),
PRINCES-STREET, LEICESTER-SQUARE, LONDON,

ENGINEERS, MACHINISTS, IRON AND BRASS FOUNDERS, &c., 62

PATENTEES and MANUFACTURERS of Improved Steam-engines, Rapid Steam Generators, Railway Wheels, Rails and Chairs, Propellers for Canal and River Navigation.

ROPE-MAKING, FLAX-DRESSING, AND OTHER MACHINERY,

Raising and Lowering Machines, Wharf, Warehouse, and Truck Cranes, Tramway, Traversing and Stationary Purchase Crabs, Tackle, &c.—Also, Steam-engines and Boilers, of various constructions; Bone, Sugar, and Mill Work, and Machinery of every description manufactured and repaired; Saw-mills, Breweries, and Factories attended.

Planing, Boring, Turning, Screw-cutting, &c.

TO RAILWAY AND ELECTRIC TELEGRAPH COMPANIES.
BY HER MAJESTY'S ROYAL LETTERS PATENT.

REID'S PATENT PREPARED WIRE FOR ELECTRIC TELEGRAPHS, WIRE ROPE, AND FENCING.

The ADVANTAGES attending this WIRE are—

1. That it may be had of any length.—2. That it is of uniform size, and, when annealed, is of one uniform degree of softness.—3. That it is prepared for being galvanised by a process which leaves it wholly uninjured.

Hitherto it has been the practice, in cleaning wire to prepare it for the galvanising process, to immerse it in sulphuric, or nitric, acid, by means of which the wire has been much injured in its structure, from the acid not acting equally on all parts alike. By the new process this evil is entirely obviated, and the zinc coating is found to be more perfect.

For further particulars apply to the patentee, at 25, University-street, London, where specimens may be seen, and all orders will receive immediate attention. 63

CONTRACTS entered into and executed with promptitude.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S 64

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers,

W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES,
RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 65

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer,

JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

PROJECTED RAILWAYS.

PATENT METALLIC SAND, OR ENGLISH POZZOLANO.
GREAT REDUCTION IN PRICE.

Extensively used in mortar and concrete at the great tunnels on the London and Birmingham Railway, in the foundations of the new Houses of Parliament, sea walls on the South Devon Railway, Clifton Reservoirs, and other works of importance.

From its chemical qualities, the metallic sand forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and, from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone—requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.—Further information will be given, and specimens shown, on application to

Mr. C. K. DYER, 4, New Broad-street, London. 66

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	32	Magnesia	2
Alumina	8	Zinc	3

AGRICULTURIST CATTLE INSURANCE COMPANY,
8, CHATHAM-PLACE, BLACKFRIARS, LONDON,

And No. 9, SOUTH ST. ANDREW-STREET, EDINBURGH.

(Registered under 7 and 8 Victoria, cap. 110.)

Subscribed Capital—£250,000. 67

This company was established for the protection of FARMERS and AGRICULTURISTS against Loss by DISEASE or ACCIDENT among their LIVE FARMING STOCK, in June, 1845; and, on the 31st of December, 1846, had issued 15,000 agreements, and paid upwards of £33,000 for losses.—This being a PROPRIETARY COMPANY, with a *subscribed capital*, insurers incur no liability beyond the amount of their premiums, and are put to no additional expense. *Three-fourths* of the insured amount is paid in case of *loss*, and *claims* are punctually paid every week.

LIFE INSURANCE DEPARTMENT.

Insurances on Lives are effected—*Annuities and Endowments* granted—and every branch of *Life Insurance* conducted on the *most liberal terms*.—Farmers and Agriculturists will find this office *moderate* in its *rates*, and peculiarly adapted to their position and circumstances.

Annual Premiums for the Insurance of £100 on a Single Life.

Age next Birth Day.	Whole of Life without Profits.	Whole of Life with Profits.	For the Term of One Year.	For the Term of Five Years.
15	£1 11 3	£1 13 7	£0 16 10	£0 18 8
20	1 15 0	1 17 6	1 1 3	1 2 5
25	1 19 10	2 2 10	1 4 0	1 4 8
30	2 5 7	2 9 1	1 5 9	1 6 4
40	3 0 7	3 5 4	1 9 10	1 11 4
50	4 4 7	4 11 4	2 1 6	2 5 7

Application for prospectuses, and every other information, may be made to

WILLIAM FENTON, Esq., Manager,

OR TO THE LOCAL AGENTS.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament. 68

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (on table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 25 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 3 2
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 6

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMROUX, Secretary.

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON, 69

STAFFORDSHIRE,

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

IMPROVED LIFTING JACKS,

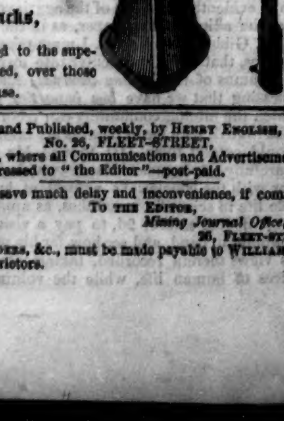
MANUFACTURED BY

GALLOWAYS' AND CO.,

KNOTT MILL,

MANCHESTER.

IMPROVED RATCHET JACK. HALEY'S PATENT LIFTING JACK.



*** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

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*** It will at all times save much delay and inconvenience, if communications are directed simply

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

AND POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MARSH, as acting for the proprietors.